



PERIODICAL

The Good Old-Fashioned Way—Florence Tomlinson

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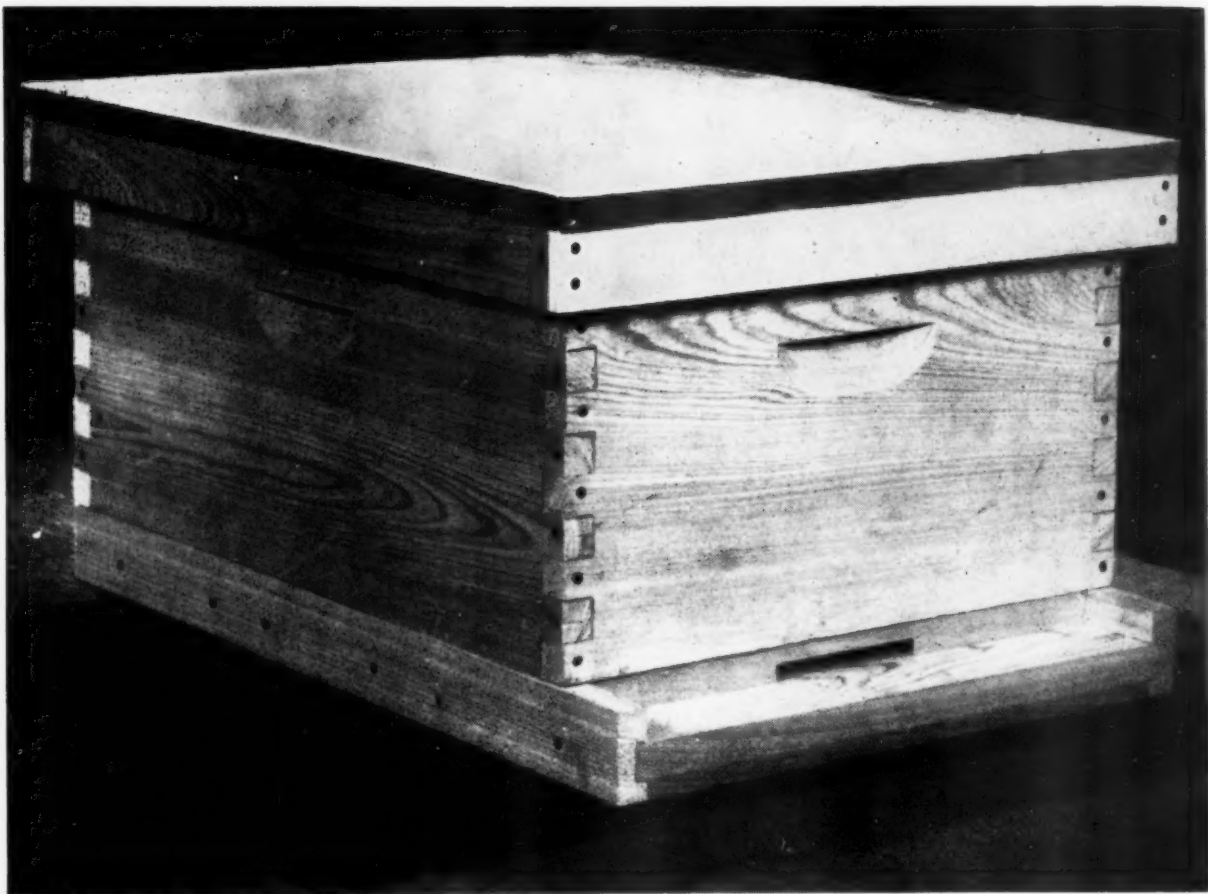
MAR 5 - 1948

DETROIT

MARCH

1948

# AMERICAN BEE JOURNAL



# **BABCOCK'S**

**New *Durabilt* Equipment**

- ★ CYPRESS, the wood everlasting
- ★ ALUMINUM, the lifetime metal
- ★ WORKMANSHIP unsurpassed

## **BABCOCK HONEY CO.**

803 Sumter Street : Columbia, S. C.

# Our 4-Frame Nuclei

**Cost More, Are Worth More  
And Produce More Honey**

---

---

**Now Accepting Orders for Shipment Apr. 15 and Later**

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---

We offer several thousand of these nuclei, each containing four combs filled with brood, pollen and honey; a young laying Italian queen and two pounds of young worker bees.

We have shipped these nuclei into every part of the country and our customers report they build up quicker, store more honey and require less attention than any other type package.

These nuclei are sold only in lots of two or multiples of two, and are shipped two nuclei in a single ten frame hive body, partitioned in the middle and screened top and bottom.

One-third down books order and choice of shipping dates; balance due ten days before shipment. Orders may be canceled any time before shipping date, with refund in full. Certificate of inspection and live delivery guaranteed.

Price—Two, four, six or ten nuclei . . . \$7.50 each

Over ten nuclei . . . . . 7.20 each

## DURABLE EQUIPMENT

METAL COVERS, telescoping on all four sides, complete with nails and pure aluminum covering, 5 for **\$7.45**

BOTTOM BOARDS, standard reversible type, made from 100 per cent pure cypress, 5 for **5.45**

HIVE BODIES, empty, complete with frame rests and hand holds on four sides, 5 for **6.95**

STANDARD TEN FRAME HIVES, complete with telescoping metal covers, hive bodies, bottom boards, and Lewis divided bottom bar frames. No inner covers. Five for **25.40**

All equipment is furnished in ten frame size unless otherwise specified. Above prices are effective March 1st,

WRITE FOR FREE 1948 CATALOGUE

**BABCOCK HONEY COMPANY**

803 Sumter Street : Columbia, S. C.



**1896-1948**

## Our Plans For 1948 Are Taking Shape

and we hope to procure enough lumber to take care of all orders received in the early part of the new year.

WATCH FOR OUR 1948  
PRICE LISTS, THEY  
WILL BE AVAILABLE  
IN FEBRUARY

**MARSHFIELD MFG. CO. (Inc.)**  
MARSHFIELD, WISCONSIN  
(The Heart of America's Dairyland)

## Calling All Beekeepers! Calling All Beekeepers!

WE ARE OFFERING YOU

## Italian Package Bees

that have been giving satisfaction all over the U. S. and Canada. If you have been our customer you know; if not, now is the time to try for yourself.

Packages are prepared overweight with young queens and bees of producing strains bred for increased production.

### 1948 PRICES

2-lb. with queen ..... \$4.00  
3-lb. with queen ..... 5.00

10% deposit with order balance ten days before shipping date.

*"Satisfaction Guaranteed"*

## Rossman & Long

P. O. BOX 133  
MOULTRIE, GA.

## For 1948 You Want Young Highest Prime Quality Package Bees and Queens Our droneless packages and young queens satisfy

Improved strain of three-banded Italians backed by over 25 years; careful selecting, breeding, and shipping to all points in U. S. A. and Canada.

Our breeding and mating stock is carefully picked and tested out for the coming season each year from hundreds of best-by-test colonies, which gives you benefit of each season's improvements when buying from us.

We are booking orders for the season of 1948, plan your requirements for this coming season and place your order early, we are working each day from now on to fill your orders promptly with the very best of QUALITY by test, let us know of your 1948 requirements.

ORDERS BOOKED 20% DOWN PAYMENT, BALANCE  
DUE 10 DAYS BEFORE SHIPMENT.

	Queens	2-Lb.	3-Lb.	4-Lb.	5-Lb.
1-24	\$1.40	\$4.50	\$5.85	\$7.20	\$8.55
25-99	1.30	4.25	5.55	6.85	8.15
100-up	1.20	4.00	5.25	6.50	7.75

## H. A. FARMER APIARIES

Cottonwood, Ala. : Phone 2582

TELEGRAPH AND EXPRESS OFFICE,  
DOTHAN, ALABAMA

## Lotz Sections

*"The Best Money Can Buy"*

GET YOUR ORDER IN EARLY for our high grade sections—made of smooth, clear basswood lumber. The dimensions are accurate, and the workmanship of the best. A high glossy polish, smooth dovetails, and oval V-grooves are additional features of our sections. Furnished in the Mill Run Grade, split or unsplit in either Plain or Beeway styles.

### ALSO

A Complete Line of  
**Foundation**  
**Woodenware**  
**Accessories**

## AUGUST LOTZ COMPANY

MANUFACTURERS AND JOBBERS  
OF BEE SUPPLIES

WRITE FOR PRICES

**BOYD, WISCONSIN**



# Leather Italian Queens and Package Bees

**FROM EVANGELINE : OPEN DATES IN APRIL**

For good results place your requirements with us now. We invite both small and large orders from our old and new customers. Our bees are in the best of condition—orders will be shipped as booked. *OUR QUEENS ARE GUARANTEED TO GIVE SATISFACTION.*

PRICES FROM LATTER MARCH (Weather Permitting) TO JUNE 1ST, 1948

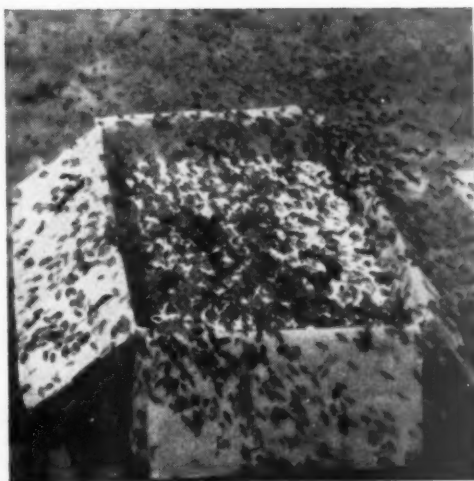
	1-24	25-99	100-up
2-lb. package with queen	\$4.50	\$4.25	\$4.00
3-lb. package with queen	5.85	5.55	5.25
4-lb. package with queen	7.20	6.85	6.50
5-lb. package with queen	8.55	8.15	7.75
Queens (postpaid)	1.40	1.30	1.20

Queens' wings clipped if requested—no extra charges.

Package bees shipped express COLLECT unless otherwise specified. Small 10% deposit will hold order—balance payable shortly before shipment.

**Evangeline Bee Co. : Breau Bridge, La. : Phone 296W : Steven Dupuis**

## POLLEN SUBSTITUTE



Bees wildly working pollen substitute.

Dry pollen substitute is so easy to feed. Simply mix the two flours and place in an open tub, hive cover or any shallow container available in front of the hives any day when the bees are flying, starting in February north of the Ohio River and earlier farther south.

By feeding pollen substitute the bees will build up faster and be all around in better shape. Figure 5 pounds of substitute per colony and order now as freight is moving slowly. A good mixture is one part of yeast to five of soy.

5-lb. bag yeast	\$ 1.50	Wt. 7-lbs. F.O.B. Paducah
25-lb. bag yeast	5.00	Wt. 27-lbs. F.O.B. Paducah
100-lb. bag yeast	15.00	Wt. 103-lbs. F.O.B. Paducah
25-lb. bag soy flour	\$3.00	Wt. 27-lbs. F.O.B. Paducah
100-lb. bag soy flour	7.95	Wt. 103-lbs. F.O.B. Paducah

DETAILED INSTRUCTIONS WITH EACH SHIPMENT

**WALTER T. KELLEY CO.**

**BOX 210 : PADUCAH, KY.**

## PACKAGE BEES with Queens

**ITALIANS**

PRICES—WITH QUANTITY DISCOUNTS

	1-9	10-49	50-99	100 & above
2-lb. pkg. with queen (each)	\$4.50	\$4.25	\$4.15	\$4.00
3-lb. pkg. with queen (each)	5.65	5.40	5.30	5.15
4-lb. pkg. with queen (each)	6.80	6.55	6.45	6.30
Queens (each)	\$1.35. Tested \$2.00.			

WE SERVE TO SERVE AGAIN

**SUNNY SOUTH APIARIES**

**MARKSVILLE, LA.**

**I. CLARK, Prop**

## ITALIAN QUEENS

The finest that you can buy. A trial order will convince you. Satisfaction guaranteed and safe arrival. 10% books your order, balance 10 days before shipping date.

PRICE QUEENS \$1.15 EACH  
Write for price on package bees

**BAYOU BEE CO.**

RT. 1, BOX 49, MONTEGUT, LOUISIANA

**The Newton Bee Co.**

ROUTE NO. 2, BATON ROUGE, LA.

**Package Bees  
Queens**

## MANY THANKS

Please send no more package orders for 1948.

Can accept queen orders for shipment after May 20th.

**ITALIANS  
CAUCASIANS**

**Weaver Apiaries  
Navasota, Texas**

**KOEHNEN'S**

**Package Bees and Queens**

For Quality and Service

**KOEHNEN'S APIARIES**

GLENN, CALIFORNIA

**WANTED** Thousands of Rabbits and other Small Stock, Poultry and Birds, Let

**'STANDARD RABBIT & PET JOURNAL'**

Bring you the Monthly News of Rabbit, Cavy, Small Stock, Poultry, Birds and other Pets.

**STANDARD RABBIT AND PET JOURNAL**  
Box 251 MILTON, PA.

**Package**

**Bees and Queens**

	Queens	2-lb.	3-lb.
1-24	\$1.35	\$4.25	\$5.25
25-50	1.25	4.00	5.00

No deposit required until March 1st.

**Hopkins Honey Farms  
MARINGOUIN, LOUISIANA**

March, 1948

Volume 88, No. 3

# American Bee Journal

HAMILTON, ILLINOIS

Managing Editor—G. H. Cale

Associate Editors—M. G. Dadant, Frank C. Pellett, Roy A. Grout

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## Package Bees and Queens High Producing Italians

PRICES FOR 1948

**2-LB. PACKAGE WITH QUEEN**

1 to 24	\$4.50
25 to 99	4.25
100 up	4.00

**3-LB. PACKAGE WITH QUEEN**

1 to 24	\$5.85
25 to 99	5.55
100 up	5.25

**QUEENS**

1 to 24	\$1.40
25 to 99	1.30
100 up	1.20

**GEO. A. HUMMER & SONS**

ESTABLISHED 1872

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Try an A-B-J Classified Ad

## Italian Package Bees and Queens Italian

### PRICES

2-lb package with queen	\$4.00
3-lb. package with queen	5.00
Young untested queen postpaid	1.00

We serve to serve again.

**Gulf Coast Bee Co. : Schriever, La.**



FOR BETTER BEEKEEPING

## DADANT'S FOUNDATION

FIRST CHOICE OF EXPERT BEEKEEPERS

# Better Bred Queens

## Three-Banded Italians

There is always room at the top. I believe our stock, methods of breeding, service and management are as good as any of the producers of bees and queens. But with all this there is room for improvement. We are on our toes to make our bees better and better. Have plenty of bees. Some good shipping dates open, April 1st to 10th especially. Orders booked without deposit at the following prices:

	Queens	2-lb.	3-lb.	4-lb.
1-24	\$1.40	\$4.50	\$5.85	\$7.20
25-99	1.30	4.25	5.55	6.85
100 up	1.20	4.00	5.25	6.50

**Calvert Apiaries**

**Calvert, Ala.**

## Garon's Package Bees and Queens : Three-Banded Italian Stock of Superlative Quality

Bred for Heavy Honey Production, Moderate Temper and Other Desirable Characteristics.

FOR QUEENLESS PACKAGES, DEDUCT THE PRICE OF THE QUEEN	PRICES	2-lb. with queen	3-lb. with queen	4-lb. with queen	Queens
1- 9	-----	\$4.40	\$5.55	\$6.70	\$1.35
10-24	-----	4.25	5.35	6.50	1.30
25-99	-----	4.15	5.25	6.40	1.25
100 up	-----	4.00	5.15	6.30	1.20

For our Disease Resistant Queens please turn to page 157 of this magazine. Full weight packages—Light containers—Prompt Shipment.

**GARON BEE COMPANY : DONALDSONVILLE, LA.**



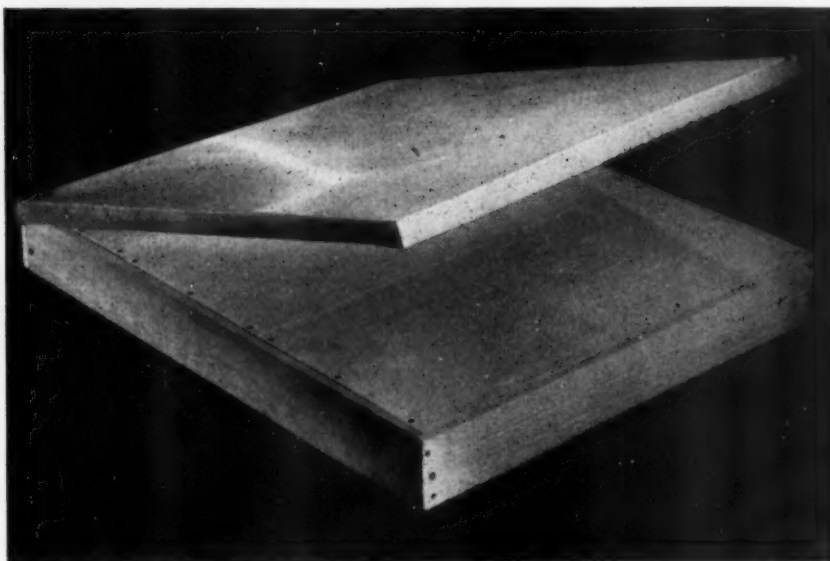
**Actual photograph of aluminum covering being fitted in place on wood telescoping cover.**

**Prices on 10-Frame Size**

39 cents each in packs of 50  
41 cents each in packs of 25  
44 cents each in packs of 10  
47 cents each in packs of 5

**Order only in packs as specified above**

After years of scarcity, we are now able to give immediate shipment of any quantity of replacement metal for your wartime covers. Built of heavy gauge aluminum, these metal covers will fit all standard size telescoping wood covers.



Actual tests prove that aluminum is ten to fifteen degrees cooler in hot weather than galvanized metal. Aluminum should not be painted as it will never rust and will last a lifetime. Each metal covering is folded down for three quarters of an inch on all four sides and is guaranteed to be accurately cut and shaped so as to fit perfectly.

**BABCOCK HONEY CO.**  
COLUMBIA, SOUTH CAROLINA

**WEST  
ACRES  
MEANS  
QUALITY  
BEES & QUEENS**



To other firsts we now add, first in the commercial shipping of package bees by air. We are holding some packages available to new customers March 26 to May 5. If you are interested in receiving these by air contact us and we will try to work out the details. Customers in Colorado, Wyoming, Nebraska, Iowa, Illinois and Ohio near United Air Line fields are particularly desired.



**HARRY J. WHITCOMBE**  
RT. 1, BOX 125B : DAVIS, CALIF.

Actual Photograph  
of

*Durabilt*

## Division Board Feeder

### PRICES

1 feeder	-----	\$ .99
5 feeders	-----	4.45
25 feeders	-----	22.00
100 feeders	-----	83.00

Please order only in lots specified above.



Babcock's DURABILT division board type feeders are designed to give years of service at lowest possible cost. Holding ten lbs. of syrup, these feeders fit in a hive in same way and take the same amount of space as one standard brood frame. An automatic hinged float prevents the drowning and sticking up of bees. Made from heavy galvanized metal, electrically welded and soldered, these feeders will not rust or leak. We recommend them for spring and fall feeding and for use in cold weather when bees will not take syrup from other kinds of feeders. **SOLD ONLY BY**

**Babcock Honey Co. : Columbia, S. C.**



Trade Mk. Reg.  
U. S. Pat. Off.

**KELLEY—"THE BEE MAN"**

# B E E S !

We have many vacant shipping dates in both April and May for package bees and can probably book your order for just the date you desire. All bees shipped by express collect from our Louisiana bee farm.

	LOTS OF 1-9	10-99	100
2-lb. swarms with queens	\$4.50	\$4.25	\$4.00
3-lb. swarms with queens	5.75	5.50	5.25
Young laying queens	1.25		1.00

**Walter T. Kelley Co. - - - Paducah, Ky.**

## ITALIAN BEES AND QUEENS

	Queens	2-lb.	3-lb.	4-lb.
1-24	\$1.40	\$4.50	\$5.85	\$7.20
25-99	1.30	4.25	5.55	6.85
100-up	1.20	4.00	5.25	6.50

SHIPPING POINT EPES, ALABAMA

LITTLE BROS. : Sumterville, Ala.



**HAZEL-ATLAS**  
**GLASS CO.**

WHEELING, W. VA.

## CAUCASIAN

PACKAGE BEES AND QUEENS  
FOR 1948

LOHMAN BEE CO.

RT. 1, BOX 340 C, LOOMIS, CALIF.

## FOR SALE—QUEENS

My queens have the qualifications to make you a successful beekeeper. Three Band Italians only. Pure mating and satisfaction guaranteed. Write for my attractive prices and open dates.

S. C. ZEIGLER

Ft. Deposit, Alabama

American Bee Journal Classified Ads Bring Satisfactory Results

## LEATHER ITALIAN QUEENS

Begin shipping April 1st

SEND

YOUR

ORDER

**\$1.25**

O. K. ANDERSON & SON  
COFFEE SPRINGS, ALA.

## THRIFTY QUEENS

Combless packages and queens.  
THREE-BANDED ITALIANS ONLY

W. J. Forehand & Sons  
FORT DEPOSIT, ALABAMA  
Breeders Since 1892

AUSTRALIAN BEEKEEPING NEWS  
The Leading Bee Journal of  
Southern Hemisphere is the

## AUSTRALASIAN BEEKEEPER

Subscription 8 shillings per year, start any time. Enquire for International money order for 8 shillings (Australian) at your Post Office. Write now to The Editor, P. O. Box 20, West Maitland, New South Wales, Australia.

BLUE RIBBON

## Package Bees & Italian Queens

FOSTER APIARIES

COLUSA, CALIFORNIA

Successor to Thos. C. Burleson

WE ARE BOOKING ORDERS FOR SPRING 1948

Only 20% down, balance 10 days before shipping date. Prices as follows:

2-lb. package with queens	\$4.00
3-lb. package with queens	5.00
4-lb. package with queens	6.00

## THE STAR BEE FARM

Adolph Guille, Prop.—Hessmer, Louisiana

## WESTERN CANADA BEEKEEPER

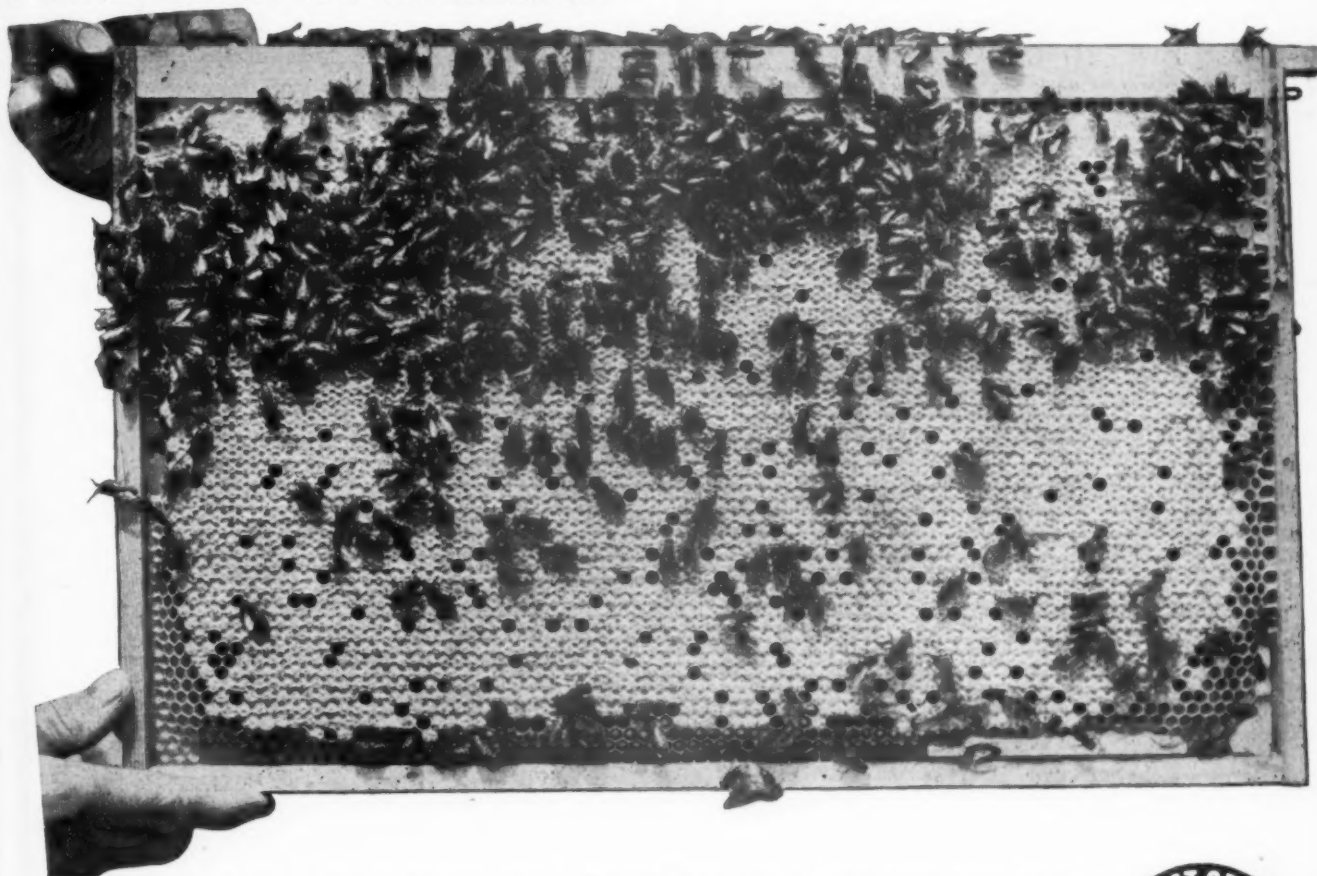
Subscription \$1.00 per year, \$1.50 two years, \$2.00 three years. In combination with American Bee Journal \$2.25 per year.

Timely topics on western Canadian beekeeping and all the news about Canada and Canadian market. You cannot afford to be without the most up-to-date information in these days of great changes. Sample copy free. Address WESTERN CANADA BEEKEEPER, 206 Donalda Building, Winnipeg, Manitoba, Canada.



## Combs That Do So Much ..... And Cost So Little

When you use DADANT'S CRIMP-WIRED FOUNDATION you get combs that, with good care, will last almost as long as your equipment.



Combs built from Dadant's Crimp-wired Foundation are a long term investment. They will last for years of crops and many colony buildups. Each sheet of this sturdy foundation starts to save you money the moment you put it in the hive and it goes on saving steadily, year after year.

Too, you get full worker combs. The best queens can't get bees from poor combs. But, put good queens and good combs together and watch the bees pour out. The strong colonies you get will bring in the greatest possible amount of honey.

When you want quality comb honey, remember Dadant's Superlative Surplus, the Finest made. . . . And Dadant's Plain (unwired) Foundation for those who need it.



## DADANT & SONS

HAMILTON, ILLINOIS

Makers of FAMOUS FOUNDATIONS

Crimp-Wired — Plain — Surplus

Be sure to get our 1948 bee supply catalog. Have your name put on our mailing list now.

# STOVER'S

## A BEE TO BE PROUD OF

**F**ORTY years ago (1908), a carload of bees was brought from Strasburg, Virginia, to Mayhew, Mississippi. This new outfit was called The Stover Apiaries, a name which we have been proud of all these years. ¶ We have grown up with the package bee business, always trying to improve both the quality of our bees and our service to you—for on your success depends our future existence. ¶ Wherever you are and whenever you need bees or queens, try Stover's. You won't regret it.

ITALIAN		Prices to May 20th		CAUCASIAN		
		QUEENS	PACKAGES			
			2-Lb.	3-Lb.	4-Lb.	5-Lb.
1-24	\$1.40	\$4.50	\$5.85	\$7.20	\$8.55	
25-99	1.30	4.25	5.55	6.85	8.15	
100 up	1.20	4.00	5.25	6.50	7.75	
Queens postpaid, clipped or airmailed, at no extra cost						

**THE STOVER APIARIES**  
MAYHEW, MISSISSIPPI

# Feed Bees Pig Iron?

Down in the deep South of the United States of North America, where the production of package bees and extra queens is concentrated, there is a known soil deficiency of several minerals. . . . Salt is typical. Dairy feed with 1% "mineral mix" content is commonplace with progressive dairymen. The factual results are miraculous.

In our effort to produce better bees, we are committed to a policy of continued research. Our No. 1 project is to ascertain if (and to what extent) the quality and productivity of our bees can be increased by the supplemental feeding of these chemicals lacking in our soil. . . . To finance various research projects, we are setting aside (as an expense to be borne by us) fifty cents from the sale of each package of bees.

We as yet can fill additional orders up to 6000 pounds of bees and 5000 extra three-band Italian queens. Two pound package, with queen, \$4.25; and three pound package, with queen, \$5.50. Queens \$1.25; tested queens \$2.00. At this late date payment in full with order is necessary for prompt service. If we cannot ship within five days of requested date, your money will be cheerfully refunded. Live delivery of package bees by collect express is, of course, guaranteed. Queens air-mailed and clipped, if requested.

Financial reference: American National Bank & Trust Company, Mobile, Alabama. Ethical reference: Mr. Eugene Cutts, President Alabama Beekeepers Association.

**Southern Apiaries & Supplies Co.**  
**Chatom, Alabama**



## BESSONET'S ITALIAN BEES AND QUEENS

We are soliciting orders for shipment after May 10th at the following prices:

You are assured of **QUALITY, SERVICE** and fair dealings.

Quantity	Queens	2-lb. Pkg.	3-lb. Pkg.
1-24	\$1.40	\$4.50	\$5.85
25-99	1.30	4.25	5.55
100-Up	1.20	4.00	5.25

**BESSONET BEE COMPANY : Donaldsonville, La.**

## It's a Good Idea

This time of year to gather up all your old comb and cappings and have them rendered into beeswax before the wax moths consume any part of it. We charge only 2 cents a lb. for rendering when your old comb or cappings weigh 100 lbs. or more (net), 3 cents on smaller shipments. We are buying clean beeswax today at 43 cents a lb. delivered.

We are always buying honey. Send **SAMPLE**, state how much you have and quote your best price. We remit promptly for honey or wax shipments.

Send for our money saving price list on bee supplies.

**The Fred W. Muth Co.**

**229 Walnut Street**

**Cincinnati 2, Ohio**

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	Queens	2-lb. Pkg.	3-lb. Pkg.	4-lb. Pkg.
1-24	\$1.40	\$4.50	\$5.85	\$7.20
25-99	1.30	4.25	5.55	6.85
100-up	1.20	4.00	5.25	6.50

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We have increased our number of colonies of bees and queen yard 125%. We solicit large package and queen orders.

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Queen (each)	1.30	1.25	1.20

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## Quality Three-Banded Italian

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Orders can only be accepted for the last half of May. All previous dates filled.

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Patent Pending

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Additional pounds bees \$1.00 per lb.

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1 to 25	\$1.25 each
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All bees shipped in new cages. Certificate with every order.

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This is the best POLLEN SUBSTITUTE on the market today for forcing Queen Laying and Brood Rearing. The best insurance you can buy for a big Honey Crop and building up Package Bees. Ready to feed, no fuss, no muss. Order Now. 1, No. 10-lb. pail \$3.50. 6 for \$19.00, F. O. B. Glencoe.

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3-lb. pkgs. with queen	5.00	4.90
Queens	\$1.25	1.10

Guaranteed full weight and prompt shipment.

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is a scientifically Blended Bee Food compounded specifically to furnish the bees and brood with a vitamin enriched substitute for nature's own pollen. Send \$1.00 for a post-paid trial bag with feeding instructions. The bees love it.

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We offer excellent quality Italian queens, \$1.25 each—April and later shipment. We would be glad to serve you.

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BRED FOR GENTLENESS AND HIGH PRODUCTION. Priced at \$1.20 each after April 1st. Package bees with queen 2-lb., \$4.00; 3-lb., \$5.00. Will trade queens for Supplies.

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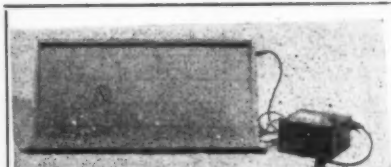
### Package Bees & Queens

BRIGHT THREE BANDED ITALIANS  
Our high quality Mott strain. They satisfy.  
Price to June 1st.

	Queens	2-lb.	3-lb.	4-lb.	5-lb.
1-24	\$1.40	\$4.50	\$5.85	\$7.20	\$8.55
25-99	1.30	4.25	5.55	6.85	8.15
100 up	1.20	4.00	5.25	6.50	7.75

We ask 10% deposit on orders booked in advance.

TAYLOR APIARIES, Luverne, Ala.



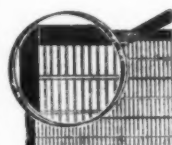
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Price, \$11.50. Wt. 3½ Lbs.  
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#### THE ONLY WORTHWHILE QUEEN EXCLUDER

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Chrysler's All Steel Electric Welded Queen Excluder allows maximum bee passage, better ventilation, more honey production. No wood, no sharp edges to injure bees, no burr combs. New rust proofing process. So durably made and accurately spaced that it is permanently Queen excluding and will last a lifetime. Sales increasing steadily each year. For earliest delivery place your order at once. Send for circular E-5.

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Don't wait! Book your orders now for our Three-Banded Italian Queens and Bees. Prices: 2-lb. pkg. \$4.50; 3-lb. pkg. \$5.75. Queens \$1.50. 25% to book order, balance 10 days before shipment.

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#### Quality Bee Supplies

A COMPLETE LINE—OVER 350 LISTINGS.

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### The John M. Davis Strain Italian Queens

Bred the Davis way. Guaranteed to please or your money refunded, you be the judge. A good queen is PRICE-LESS. A poor queen is Worthless.

#### QUEENS

Untested April 15 to June 1, \$1.25 ea.  
Tested April 15 to June 1, \$2.50 ea.  
Untested only after June 1, 1.00 ea.  
Why not try these queens and see for yourself that it pays to buy your queens at

#### LITTLE'S APIARIES

P. O. Box 122, SHELBYVILLE, TENN.  
"Where Quality Reigns"

American Bee Journal Classified Ads  
Bring Satisfactory Results.

## Italian Package Bees & Queens For 1948

FOR CHOICE SHIPPING DATES PLACE YOUR ORDER NOW  
EACH PACKAGE WITH YOUNG LAYING QUEEN

	1-24	25-49	50-99	100-up
3-lb. ....	\$5.50	\$5.35	\$5.20	\$5.00
2-lb. ....	4.50	4.35	4.20	4.00

For queenless package deduct \$1.25

Send \$1.00 per package to book your order and hold shipping date. Balance due not less than 10 days before shipment is made. Deposits promptly refunded if order is cancelled 10 days prior to shipping date. Live delivery guaranteed. Health certificate with each order. Quality does not cost—It pays.

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WARREN WILBANKS, Manager

CLAXTON, GEORGIA

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Oldest Combless Package Bee Shippers in Louisiana.

### Disease Resistant Stock-Italian Bees & Queens

2-lbs. with spring bred laying queens	\$4.25
3-lbs. with spring bred laying queens	5.25
Extra queens—any number	1.25

Red Stick package bee cages are light in weight, made from cleaned, resawed lumber never thicker than 3/15 inches, saving express weight. Watch the sturdy, well built, cheerful 1948 Red Stick Package Bees go by on your railroads. Packages well prepared, drone free; a bee swarm so easy to handle, so easy to hive.

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# As We

## *Honey Selling, a Lost Art*

AT the Salt Lake City convention Harold Clay gave the beekeepers much food for thought in his discussion of the market situation. He called attention to the fact that the beekeeper no longer pushes the retail sale of his product and that selling has almost become a lost art.

Our older readers will well remember that fifty years ago the average beekeeper sold most of his honey at retail through personal contact with his customers. The few honey packers of that day confined themselves principally to the markets in the large cities leaving the market elsewhere to local honey producers.

The writer recalls the activity of F. W. Hall, a prominent Iowa beekeeper, who found an outlet for much of his crop at farm sales. He would take a load of honey in five-pound pails and open one for sampling at the lunch hour. When the crowd dispersed pails of honey would go away in every direction.

If the beekeepers of the present day would put the same effort behind the sale of honey that was the rule at that time, the crop would be insufficient to meet even a substantial part of the demand. There is a very large potential market for honey but it will require a well-sustained selling effort to reach it.

## *Honey From Red Clover*

RED clover still remains the most popular legume for farm rotation in this country. For more than half a century beemen have looked longingly at the thrifty fields and hoped for a miracle which would make the nectar available to the bees. Of late the clover grower has become interested in bees since his seed crop has declined to a low point because of the disappearance of bumblebees. Honeybees in this country do get pollen from red clover but rarely is a worth-while honey crop reported from this source.

Now that seed growers have come to depend upon bees, some effort is likely to be made to develop a red clover which is a good source of honey. We know that this is possible from the experience in other countries.

Many years ago when traveling in Russia, Prof. N. E. Hansen, plant explorer for the U. S. Department of Agriculture, visited a valley in that country where the beekeepers harvested their principal honey crop from red clover. Whether they had developed a special strain of clover adapted to the honeybee or whether there was a heavier yield of nectar we do not know.

We know that there are neighborhoods in England where the honey crop comes from red clover more dependably than from white Dutch clover and we know also that it is only from specially favored localities that this is true. We are told that heavy crops of honey are harvested from red clover in some neighborhoods while not far away the bees get little beside pollen from that plant.

This problem is receiving serious attention at the Iowa Experiment Station. The best acclimated strain of red clover common to the state is being crossed with a strain with short corolla tube.

It appears to us that the solution of the problem of better seed production from red clover will come when we find a strain offering an abundant supply of nectar to the honeybees. In their search for nectar the bees will insure pollination of the flowers and a profitable crop of seed.

## *Changing Bee Pasture*

OF one thing the beekeeper can be sure. The source from which his honey comes will change from year to year. If we can judge the future by the past the honey of the future will come from plants which are now but little known.

Sixty years ago basswood was a major source of surplus honey. Next only to white clover it was recognized as the honey available in largest quantity. As the years passed the trees were cut



# See It



and the volume coming to market declined until it is no longer important in the greater part of the honey producing areas.

As the output from basswood declined there was a corresponding increase in the yield from sweet clover as that plant found its place in the farm rotations. Orange honey, which in the old days was known only as a holiday luxury available in very small quantity, is now produced by carloads in the citrus belts of California and to a less extent in Arizona, Texas, and Florida.

In like manner we can review the entire field of honey production in the days of our grandfathers and find few neighborhoods where the bee pasture is unchanged. Many of the wild plants from which large crops were harvested have all but disappeared as is the case with catsclaw and huajillo in many southwestern localities.

This review is important to emphasize the necessity of organized activity on the part of the beekeeper to secure distribution of new plants which yield nectar freely. Active groups can insure the planting of the roadside in such a way as to go far to stabilize the bee pastures along the way. New forage crops such as birdsfoot trefoil and Pellett clover can be brought to the attention of the farmers and thus find a place as field crops. *Lespedeza bicolor* and *L. cyrtobotra* will be largely planted for game cover and erosion control if brought to the attention of the right people.

The bee pasture of the future will largely depend upon the activity of the beemen of today. Results already secured by the honey plants committee of our national organization demonstrate this fact.

## What Price Honey

THE thing which appears to be uppermost in the minds of many of our readers is the price at which honey can be expected to continue to sell in the years ahead. Changes come with such rapidity that we should become accustomed

to extremes. Not many years ago a five pound pail of honey sold as low as 35 cents. Recently we paid \$2.45 for a five pound pail. One price was as much too high as the other was too low. The extremely low price left little for the producer and the high price was likewise hard on the consumer. It should be possible to find a reasonable point between these extremes where prices could be stabilized. It should be high enough to guarantee a fair return to the producer and low enough to enable the consumer to include honey as a regular article on his table. Such a market would be much better than the boom-and-bust cycle which we continue to follow.

## The Happy Beeman

THE three things most to be desired: "Security, independence and contentment," seem to be beyond the reach of the mass of mankind in this time of great uncertainty. Whether we read the newspaper or listen to the radio our anxiety is likely to be increased by the numerous accounts of conflict and discontent.

Contentment is the thing most to be desired of life, yet we seldom find it with men who have achieved great success in business or the practice of a profession. It is often to be found with the family who keep bees in some quiet spot far from the noise and confusion of the modern city.

There is something about the atmosphere of the apiary which is soothing to tired nerves and restless spirits. There is danger, however, of losing this happy state by acquiring too many bees and subjecting one's self to a similar strain by attempting too much. The late Noah Williamson once remarked that when he had a small outfit he knew every colony intimately and found great happiness with his bees. When he had a thousand colonies he was beset by too many problems and too busy with details of an exacting business to find his former measure of contentment. One is no happier with too much than with too little.



March



1948

## Drying and Storing Pollen Trapped From Honeybee Colonies<sup>(1)</sup>

By A. W. Woodrow

U. S. Department of Agriculture, Agricultural Research Administration, Bureau of Entomology and Plant Quarantine

THE rapidly expanding use of pollen and pollen substitutes for feeding colonies in time of pollen scarcity brings on new problems for the beekeeper. To provide numerous colonies with adequate materials for maximum brood production at such times, it is necessary to obtain pollen by trapping during periods when it is abundant. The trapped pollen is then mixed with soybean flour and sugar sirup for feeding.

Trapped pollen must be dried, fumigated, and stored until needed for feeding. Unless dried immediately it molds and becomes worthless. Besides being a good food for bees, pollen is eagerly sought by numerous other insects, such as wax moths, grain moths, and carpet beetles, and these insects will destroy large quantities of pollen if not controlled.

Pollen taken from the traps may be dried by spreading it out thinly on trays or papers. In dry seasons there is little difficulty in removing sufficient moisture to prevent the growth of molds, but at times of high relative humidity artificial heat is necessary. Furthermore, drying in open trays in the workshop or dwelling may cause discomfort to persons allergic to pollen.

A dehydrator built for the drying of pollen is shown in the accompanying diagram. It is similar to those used for home drying of fruits and vegetables except for one feature—the attachment of the outlet of the cabinet to a 6-inch stove-pipe flue so that any airborne pollen grains and volatile materials given off by the pollen in drying will be carried outdoors.

The cabinet was built of scrap lumber, its size being partly determined by the materials at hand. The design was modified from plans of vegetable dehydrators, and no special significance can be attached to the dimensions given.

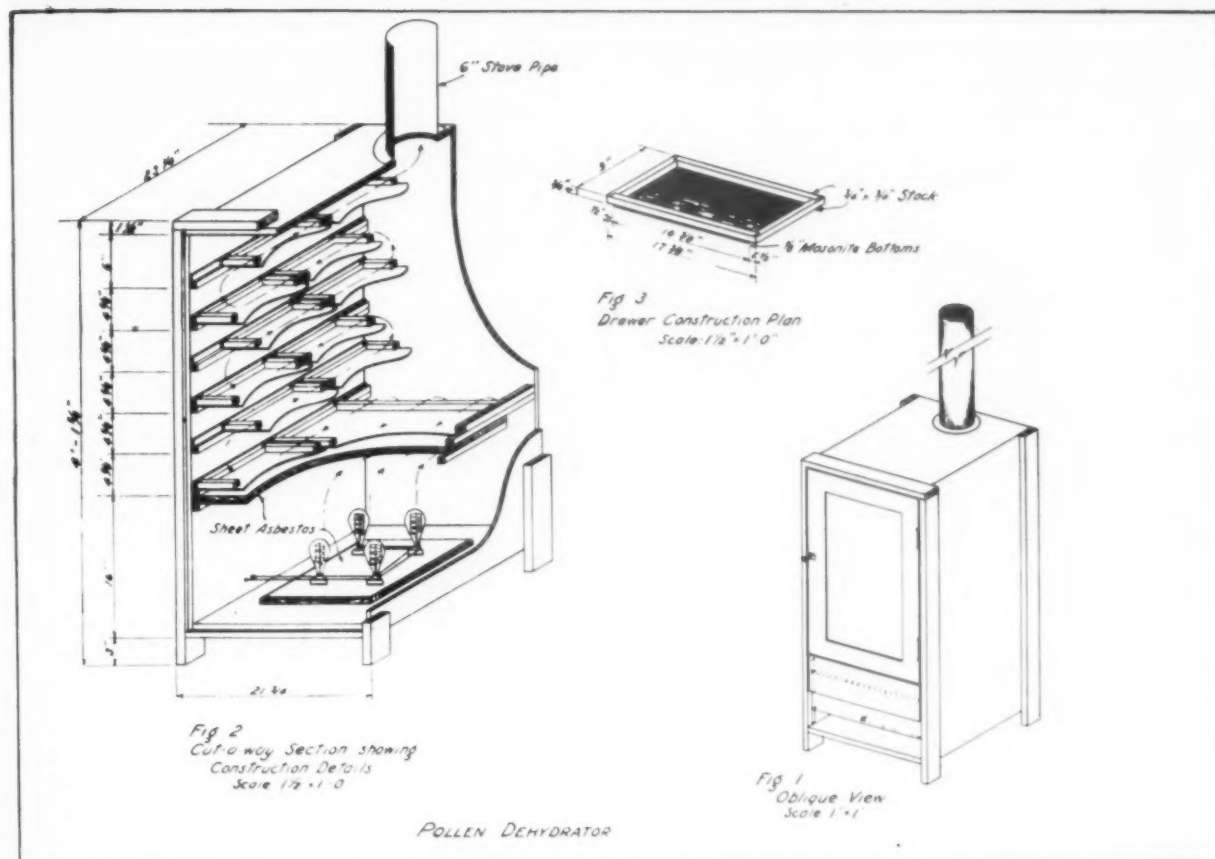
Heat is supplied by one to four 110-volt Mazda lamps. For safety, loom or porcelain tube insulators are used over the wires at the point where they enter the cabinet, and sheet asbestos is installed below and above the lamps. Sufficient free space is maintained above the lamps to prevent excessive heating of the partition immediately below the bottom shelf. A space between this partition and the bottom shelf reduces heating of pollen on this shelf. Each shelf contains two trays that will hold about 1 pound of pollen apiece. The trays are so arranged that the circulating air from below passes over the pollen in each one before reaching the tray above, as indicated by the arrows.

A dehydrator of the dimensions shown in the diagram will dry about 6 to 10 pounds of pollen per day, depending on the dryness of the pollen when collected, the relative humidity of the air, and the amount of heat supplied. This quantity of pollen may be obtained by trapping from 10 to 15 colonies.

This dehydrator was operated in an unheated room in an apiary building and was electrically heated with one or more 100-watt lamps placed in the bottom compartment. More heat would have increased the rate of drying, but high temperatures are not desirable over long periods. Rapid drying causes the exposed portion of the pollen to dry quickly while that underneath remains moist. To promote even drying, it is desirable to spread the pollen as thinly as possible in the trays. The pollen in the lower trays dries more rapidly than that in trays higher up. Increasing the total wattage of the heating unit hastens drying in the lower trays but has less effect above. Insulation increases the efficiency of the cabinet. In a heated room of low relative humidity drying may be accomplished with little or no heating within the drier and it will be more uniform.

There is a distinct draft through the drier caused by the heat and the flue, and the draft is intensified if a wind is blowing outdoors. The move-

(1) A contribution from the Bureau of Entomology and Plant Quarantine, Agricultural Research Administration, U. S. Department of Agriculture, in cooperation with the University of California.



ment of air may be demonstrated by placing a lighted bee smoker near the inlet. The smoke is quickly drawn through the drier. The draft may be regulated by adjusting the size of the inlet or the outlet.

The daily loss of moisture in several lots of pollen placed in the dehydrator was measured in May and June 1946. The pollen was trapped from four colonies and was allowed to accumulate in the traps from 5 to 8 days. Some drying occurred during this period. The pollen was then placed in the dehydrator on four shelves and dried for 4 days, the two upper shelves not being used.

The results of these tests are recorded in Table 1. The greatest loss of weight occurred the first two days, and at the end of this time the pollen, even that of high moisture content, was dry enough to keep without molding. Ordinarily the pollen is dry enough if it no longer packs into doughlike balls when pressed between the fingers. However, with some oily or sticky pollens this test might not be reliable. It is neither necessary nor desirable to dry the pollen to a flintlike hardness, for then it is difficult to soften before use.

When dry the pollen may be stored

in tightly closed 5-gallon honey cans until needed for feeding. Usually fumigation is necessary at once, and it should be repeated if insect infestation occurs. Pollen may be fumigated in the cans by dropping into it a small cheesecloth bag containing about a tablespoonful of calcium cyanide (Cyanogas) or by the use of carbon bisulfide or carbon tetrachloride. These materials are all poisonous to man, and carbon bisulfide is highly inflammable or explosive. Paradichlorobenzene and naphthalene are not suitable for fumigating pollen, because it absorbs

these chemicals. Refrigeration also is a good means of preventing insect damage.

Since the pollen is irritating to nasal passages, it is advisable to take several precautions. If possible, all work of screening and pouring the pollen should be done outdoors, preferably in a breeze. A respirator is helpful. Care should be taken to avoid spilling and spreading the pollen about rooms in which people live or work. Such distributed pollen, as well as being a source of discomfort, often becomes infested by objectionable insects.

Table 1—Loss In Weight of Pollen Dried for Four Days in the Dehydrator

Period pollen was accumulated	Period pollen was in dehydrator	Lamp used	Location of shelf in dehydrator	Original weight	Loss In Weight				
					1st day	2nd day	3rd day	4th day	Total
					Pounds	%	%	%	%
May 9-15	May 17-21	100	Bottom	1.3	13.1	1.3	0.5	0.5	15.4
			Second	1.7	10.7	1.8	0.8	0.3	13.6
			Third	2.1	9.8	2.6	0.8	0.4	13.6
			Fourth	2.0	8.7	2.5	0.9	0.4	12.5
May 22-26	May 27-31	200	Bottom	2.0	10.1	3.3	1.3	0.6	15.3
			Second	2.0	7.3	3.6	1.9	0.9	13.6
			Third	2.0	7.0	3.9	1.0	0.8	13.5
			Fourth	1.8 (1)	10.5	5.0	2.3	0.9	18.7
May 27 June 2	June 3-7	200	Bottom	3.0	7.1	3.5	1.4	0.1	12.1
			Second	2.0	7.5	2.5	1.1	+0.2*	10.9
			Third	2.0	6.7	2.6	1.4	+0.2*	10.6
			Fourth	2.0	6.6	2.9	1.4	+0.1*	10.8

(1) Very moist because of water entering trap during a shower, therefore dried separately.  
\* Increase is due to increase in relative humidity outdoors.





## HAIL TO THE KING

The king is Walter J. Harpel, Route No. 1, Crawfordsville, Indiana. Mr. Harpel is the 1947 Corn King crowned recently at the International Live Stock Show. Perhaps you may

wonder why we should make so much noise about a Corn King. I am quite sure when the story of Mr. Harpel is told, all of you will be wanting to tell the story to every farmer near you.

During the International Show I

was listening to the WLS Dinner Bell program when Russell Park interviewed Mr. Harpel. During this interview I heard Mr. Park remark that the prize winning corn was grown on sweet clover sod. This remark was really the sweetest music I had heard on our radio for a long time. If we, as beekeepers, try to sell the farmer as to how we can improve his soil fertility by growing sweet clover, it looks like we are trying to grind our own ax, but when Mr. Harpel tells us that sweet clover produced the prize winning corn it is a different story.

To be sure I had heard correctly, I wrote Mr. Harpel for the information. Here is what he had to say: "As to the sweet clover, we have been using it for several years and think it is the best soil builder there is. We most always sow the sweet clover on our wheat or oats in the spring and it stands over until the next year when we pasture it some with live stock. It stands until the next spring when we plow it under when the stalks are dead and dry. We have seeded it in the spring and plowed it under the next spring when it is about six inches high, but I don't think we get as much good out of it."

We have observed the same effect here in Illinois. During the past several years farmers have depleted their soil and now it is comforting indeed to see a man like Mr. Harpel achieve such recognition and tell the story of sweet clover. Now let's help tell this story and we beekeepers and the farmer can both grind our axes.

Carl E. Killion, Illinois.

## The Beemaster System for Hive Heating

A planograph book from Earthmaster Publications, Roscoe, California, goes into detail on using the Sechrist plan of hive heating with this Beemaster Heating Unit. It also describes and illustrates the Beemaster Twin-Colony Hive. Copies of the book may be obtained through the Journal or direct from the above address. Price \$1.00.

## 6,087,000 Colonies, Goal for 1948

The United States Department of Agriculture has just issued its third successive goal statement pointing out the need for more bees to replace the millions of pollinating insects killed by sprays and dusts. The goal for 1948 is 6,087,000 colonies, or 3% more than in 1947. The goal is purposely kept down since bee supplies may not yet be in plentiful supply.

Present market levels for honey indicate that if current prices are maintained beekeeping will be sufficiently profitable, so the increase can be profitably met in all states. Copies of the 1948 bee goals, state by state, may

be secured by writing Harold J. Clay, Honey Marketing Specialist, Fruit and Vegetable Branch, Production and Marketing Administration, United States Department of Agriculture, Washington 25, D. C.

## More Buckwheat to be Planted

Investigations recently by an Agricultural Department Scientist divulged that buckwheat plants are a source of drug known as rutin which is quite desirable in the medical profession for many ailments, particularly for the strengthening of blood vessels and the possibility of stopping bleeding, etc.

Such buckwheat plantings in central western areas where very little honey is harvested would not do, of course, a great deal of good, but it may increase the plantings and the amount of buckwheat in bloom in those areas where buckwheat honey is now already extremely well known and buckwheat areas are extensive. It is estimated that to supply the drug needed, it may take from 25,000 to 75,000 more acres of buckwheat plantings each year.

# The Big Colony Compared With The Nucleus

By  
Harry T. Starnes



THE two-queen colony as proposed by Dr. C. L. Farrar is still far from being common and the merits of artificial insemination have yet to be demonstrated for the layman. Considering the fact that most scientists have been showing us that great energy is locked up in small things, I wonder why our research men still cling to the colony of bees as the unit for advancement.

Mr. Pellett in "The Hive and the Honeybee" says that from 1874 to World War I is sometimes called the golden age of beekeeping, accompanied by a flood of inventions, most of them of little merit. If there is something wrong with beekeeping since the first war we have probably assumed something which is false. One thing we have assumed is that bees are cold blooded animals. No one seems to know for sure who started it. It is taught in most of the books. It is a hazy term, for the blood does not produce heat. There are all different shades of it, from the dinosaurs, which perished because they could not adjust themselves to season. The toads, frogs, and lizards of the age took refuge in the primordial mud and slime, for no animal protoplasm can stand freezing and live. The marsupials escaped by being warm blooded and man was in that line. The honey-

bee escaped too by way of their clustering mechanism.

Now let us leave the assumption that the colony is the unit to consider the nucleus as the unit. Is the wax comb an advantage or a disadvantage in wintering? Take a 10-frame standard hive body, place two empty combs and one comb containing honey along each side wall, having the comb of honey toward the inside which gives you six combs in the hive. Now prepare one comb of bees, about two pounds, with honey in the comb along with the queen, in other words, a one-frame nucleus. Hang this nucleus in the center of the vacancy in the hive.

This gives you a 10-frame hive with three frames along each sidewall and a single nucleus at the center, seven frames in all.

Now you have a more compact cluster, less wax to break it up. The writer has wintered bees like that here in Indiana on many occasions and never lost one. And yet most everybody would say it is not practical to winter a single comb nucleus.

However, if you place the missing three combs in the hive so that there are ten complete ones, you will in all probability lose the bees. So, it seems apparent that comb foundation or brood combs are not an advantage to wintering.

While wax is an insulator, it is not

perfect. Nature did not develop a perfect mechanism. The more combs you insert inside the cluster, the more you increase radiation.

If you attempt this "stunt," I want you to notice a few things. Note that the bees keep fairly active most of the winter, which is supposed to be against good wintering. Note, too that when spring comes, the bees will not have consumed much honey, most of it will still be in the hive. I have never had one of these nucs break down with dysentery.

All of this seems to show that comb, far from being a help in winter, is really a disadvantage and acts as a radiator of heat from the cluster. I think we can learn more about bees by working with the nucleus as a unit rather than the colony.

I have taken nuclei, wintered this way, and by a small amount of artificial heat in the spring, caused them to develop into full colonies for the honeyflow. Several men in Canada have reported that colonies having artificial heat in the spring are the ones to show a surplus in a bad season. One man has reduced 200 colonies to 100 for wintering. Next season he will divide all suitable ones and boost the weaker ones with artificial heat. This is a test worth watching.

Indiana.

## BEEHIVE VENTILATION

A new book published by the magazine Bee Craft, Bracken Dene, Manor Ways, Petts Wood, Kent, England, is entitled, "The Ventilation of Beehives," and is written by Mr. E. B. Wedmore, president of the British Beekeepers' Association. The book comprises 120 pages, is cloth bound and sells for seven shillings.

Mr. Wedmore goes into detail on the method of ventilation of the beehive in order to maintain proper conditions within the cluster so that it may survive the winter. He stresses that Cheshire and Langstroth both recognized the value of upward ventilation. Langstroth said: "This dampness . . . is one of the worst enemies with which the apiarian in a cold climate has to contend . . ." Condensation of moisture within the hive must be dealt with. According to Wedmore, "For every pound of honey consumed we shall have half a pound of water released by combustion." Another quotation of his is that "any packing to be worth while must run many inches in thickness . . . and

has the disadvantage that it slows down the penetration of heat into the hive from outside during a short sunny spell. Thus the bees miss opportunities for cleansing flights."

Mr. Wedmore rightly states that we have not as yet given enough scientific investigation into air currents, moisture disposal and temperature limits within the hive to arrive at a thoroughly definite conclusion of the proper means of ventilation and cluster maintenance.

While his experiments and those of the experiment stations with which he worked would indicate that artificial heat in the form of electric units apparently has no great effect, and perhaps may be a deterrent on the protection of the bee cluster, he is not without some question as to whether or not under special conditions electric heating may be worth-while.

The book deserves careful reading, particularly by investigators of the behavior of bees in winter and wintering problems, and should encourage research along the lines recommended.

## PUERTO RICAN BEEKEEPING

The photo shows one of our apiaries used for demonstration purposes at one of our model farms located in the mountainous sections of the island. Coffee and oranges are the most important crops at this place. Beekeeping seems to be an adequate complementary occupation to this type of farming.

Coffee must be cultivated under shade trees. The kind of trees most adaptable are all those of the legume family. Guama, moca and guava (not the guava fruit tree) rank first

for this purpose and they happen to be nectar yielding in great quantities.

We utilize these apiaries as a teaching device for beekeeping farmers in proper bee management. Meetings and Extension Schools are conducted here periodically. Groups of beekeepers from different places attend these meetings. We have to travel yet a long journey to reach the right place in beekeeping, but we are doing our best to come to it.

Elias Hernandez,  
Assistant Animal Husbandman,  
University of Puerto Rico.



## That Sulfa Credo

"A Rational Basis for Use of Sulfa," page 70, February, carried over from page 70 to page 88. In setting the type on page 88 the printer put the first line of the "sulfa" carry over at the top of the column where it did not belong. The line reading "spring or fall when supers are not," when left out of the article on sulfa, made the credo unintelligible. Since the credo is the crux of the entire sulfa article, we had two girls line that out-of-place type, down in pencil to the spot where it should have appeared. Most readers therefore found little trouble in making sense out of the advice given. We repeat the credo here:

We recommend that you use a preventive sulfa feed, either in spring or fall, when supers are not on the hives. In combination with sulfa feeding we recommend the use of a high producing stock bred for resistance to American foulbrood in all your colonies. Under this program, any colony in which American foulbrood appears should be destroyed and the equipment cleaned before being put back into use.

## "Bee-Wise"

The Provincial Apiarist's Office, in British Columbia, sponsors a new mimeograph publication with the title "Bee-Wise" containing the usual advice for the season with timely information about conditions in the Province and about local happenings. If you are interested in being placed on the mailing list and you live in British Columbia, write to the Provincial Apiarist's Office, Vernon, British Columbia.

## Wm. E. Joor

Wm. E. Joor, widely known Texas beekeeper, died in Houston at the age of 71. He was an earnest student of bee behavior and at one time was well known as a writer on beekeeping subjects. For years he served as an associate editor of the Beekeepers' Item. He is perhaps best known for his fatigue theory in queen superseding. Never a commercial honey producer, keeping no more than 50 colonies at any time, he was an active student of both practice and behavior. He attended all Texas state conventions and many regional and national meetings where he made many friends—E. Guy LeSturgeon, Texas.





# The Present Relation of Agricultural Chemicals to Beekeeping Industry

By Dr. J. E. Eckert

Division of Entomology, University of California

IN the production of food crops, whether they be orchard fruits, field crops, or for livestock forage, the need for controlling the various crop pests is just as important as the other practices that go into the making of a crop. Every cultivated plant seems to have a number of insect enemies of diseases, and weeds are a common pest of all plants. Nature has provided numerous insects which aid crop production either as enemies of the various pests or as benefactors of agriculture through their dissemination of pollen. Some agencies of state and federal government are attempting to aid Nature in its biological methods of control by increasing the number of insects and diseases that destroy the harmful pests—and with striking results in many projects already undertaken. However, the principal method of protecting various crops from insect and weed pests has been by the application of chemicals to the soil or to the plants.

Some of the chemicals are selective in that they will kill certain insects but not others, but in most cases the

poisons that kill the destructive forms also are injurious to the beneficial insects, the parasites, predators and pollinators. When the application of chemicals kills the enemies of insects, then more chemicals will have to be applied on succeeding applications to effect an economic control of the pests. This increased use of chemicals, that are toxic to pollinating insects, tends to reduce the production of those crops that are benefited by cross-pollination and thus defeats the purpose for which the chemicals are used—the production of larger and better food crops. Consequently all segments of our population should be interested in bringing about a well-coordinated program of controlling agricultural pests which will be mutually beneficial to all.

The destruction of the solitary insects that pollinate crops leaves only the honeybee as the principal insect that can be depended on for this important function of crop production. Fortunately, the honeybee colonies can be increased in number and moved from place to place as needed for pollination purposes, providing

conditions of the plants are suitable for their increase and maintenance. In those areas where chemicals are used on plants in bloom or are distributed in dust form, the results are frequently so destructive to honeybees as to make beekeeping impracticable. In such areas, beekeepers either have to go into some other business or have to move their colonies elsewhere. In either case, it must be evident to all, that those crops which are dependent on pollinating insects, will become less productive in direct proportion to the reduction in the number of pollinators. Certain chemicals, such as **Elgetol**, are being used in some sections to thin fruit by being applied to trees in bloom. These are not only destructive to bees working in the blossoms but also reduce the available food supplies needed to produce more bees for the pollination of other crops.

For many years weeds were controlled by cultural practices and by burning, with the result that a majority of the fence rows, ditch banks, highways, side roads and waste

places were covered with various weeds that provided pollen, nectar, seeds and shelter for many of the beneficial insects as well as the wild life of the open fields and forests. Then chemicals came into use as a speedier and less costly method of controlling weeds, and in some cases chemicals have been developed that kill certain weeds but not the cultivated crops that are treated. The chemical control of weeds along the highways, around the edges of fields and even in waste places is fast becoming the accepted practice. The chemical control of weeds has progressed to a point where the practice has limited the production of the number of natural pollinators and is definitely affecting the practice of keeping bees.

Of all the chemicals that have been used to control weeds, the use of **2,4 Dichloro-phenoxy acetic acid**, or more commonly known as just **2,4-D**, holds greater promise of upsetting the normal balance between beneficial insects and their supporting pollen and nectar plants than any other one chemical now known. The application of small amounts of this chemical will kill most broad-leaved plants, among which are many of those the native pollinators and the honeybee depend on for nectar and pollen. The chemical itself is not very toxic to bees and in normal practice, application is made before the plants come into bloom. Its relationship to beekeeping lies simply in the reduction of the available pollen and nectar sources necessary for the production of colonies for pollination or for honey production. Many of the weeds controlled by this chemical come into bloom in early spring when their pollens are needed to build up the numerical strength of colonies for pollination purposes or for the honeyflow. The clovers along the highways and ditch banks are also used as a main source of supply of honey. Serious consideration needs to be given to controlling the use of chemicals for weed control or to include a program of roadside planting of vegetation that would replace the pollen and nectar sources thus destroyed.

For many years, arsenicals were used almost exclusively as a means of controlling insects and still constitute the greatest chemical hazard to beekeeping. Arsenicals applied in either liquid or dust form have killed thousands of colonies of bees every year in agricultural areas of this

country. Arsenicals in dust form have proved to be so destructive to beekeeping that this industry cannot survive in any territory where calcium arsenate dust is generally applied to commercial plantings. It is physically impossible to prevent calcium arsenate dust from drifting for miles beyond the fields treated when the material is applied by airplane or by powered ground rigs. Calcium arsenate is such an inferior insecticide and the extent of the drift is so great that it has to be applied in extremely heavy concentration to effect economic control.

The use of **cryolite**, as a substitute for arsenic, has proved less destructive to beekeeping although losses of colonies have been reported from its use on citrus and on beans. During World War II, **DN-111** was used extensively as a substitute for nicotine compounds in the control of red spider. Beekeepers reported serious losses in regions where it was applied when the material drifted over their hives or where bees worked on the plants dusted or sprayed.

**Rotenone** and **sabadilla** are both destructive to bees when applied to plants on which the bees are working but both lose their toxicity within 24 to 48 hours after being applied. Both are contact insecticides and the bees die largely in the fields treated. **Phenothiazine**, a possible substitute for arsenicals in the treatment of some insect pests, has been found to be a comparatively safe insecticide as far as beekeeping is concerned.

The introduction of **Dichlorodiphenyl trichloroethane**, or **DDT** as it is most commonly known, during and after World War II, caused considerable concern among beekeepers because of its high toxicity to a wide variety of insects. At first it was erroneously reported to be nontoxic to bees and yet was highly toxic to flies and mosquitoes. The writer's observations have indicated that approximately 4.6 mg. per bee was the L/D-50 or sufficient to kill 50 per cent of the bees when fed to them in sugar sirup. (A microgram is one millionth of a gram.) It kills bees when dusted on them in the form of a 2 per cent powder but some of the bees recovered. DDT will control many insects when applied at the rate of 1.5 pounds or less per acre and seldom more than 2 pounds are used. In the control of mosquitoes, the usual application is one-tenth pound per acre, and this quantity has not been injurious to colonies left in the

areas treated. When DDT is applied to alfalfa in bloom, at the rate of 1.5 to 2 pounds of active ingredient per acre, the field forces of colonies have been reduced in many cases, while in others no appreciable damage has been observed. When DDT is applied to alfalfa or other crops before or after bloom stage, no injurious effects on bees have been reported. DDT has been used successfully in the treatment of cotton and many other crops without noticeable injury to colonies left in or near the fields treated.

Another hydrocarbon, hexachlorocyclohexane, or better known as **666** and **benzene hexachloride**, is toxic to honeybees in much the same manner as DDT. In proper amounts it is injurious as a stomach poison and as a contact insecticide.

**Chlordane**, a hydrocarbon first known in this country as 1068, and now sold as Octo-Klor, Dowklor and Velsicol 1068 was found by the writer to be highly toxic to honeybees when applied as dust, or incorporated in sugar sirup or on contact. It also has considerable toxic action as a fumigant over a period of at least 8 weeks, under laboratory conditions.

A 3.1 per cent chlordane dust incapacitated bees within 3 to 4 hours when dusted on them in a cage and the bees died within 7 to 8 hours. When bees were allowed to run over a small piece of waxed paper on which the 3.1 per cent chlordane dust was lightly sifted, all bees placed in the cage died within 24 hours over a period of several days, even though there was no visible evidence of the dust on the paper toward the close of the test. This indicated that chlordane is highly toxic to bees as a contact poison.

When a cage was sprayed with a five per cent solution of chlordane in acetone and allowed to dry, various lots of bees placed in the cage over a period of 8 weeks died from 3 to 12 hours. When exposed to the cage for 10 minutes and then removed, the bees died within 24 hours. Bees placed in a cage over the sprayed cage, but not in contact with it, became incapacitated in 3 hours. In another test, the walls of a comb room were sprayed on Dec. 4 with a 5 per cent wettable chlordane spray as a remedy for ants. Bees suspended in cages in this room became affected in 3 hours and all were moribund within 6 hours. Other lots of bees died within 9 hours when placed in the same room 4 weeks after the spray

was applied. Two combs were placed in the same room on December 15, removed on December 30 and placed in 3-frame nuclei. Most of the bees in the two nuclei died within 24 hours and practically all were dead in 48 hours.

When bees were fed chlordane in sugar sirup, the L/D-50 was approximately 1 mg. per bee. Strangely enough some of the bees affected recovered in the protection of the cages. Under normal conditions, an amount somewhat less than 1 mg. per bee would prove fatal as the bees were incapacitated for a few hours after feeding and would be subjected to other destructive factors, such as the heat of the sun, ants, dust and starvation.

The bees showed no dislike for chlordane or any of the other hydrocarbons when the chemicals were dissolved in acetone or alcohol and then mixed in lethal amounts with sugar sirup. They were greatly agitated when brought in contact with the dusts and soon after coming in contact with the sprayed papers or sprayed cages.

**Rothane**, commonly known as **DDD**, is less toxic to bees than any of the other hydrocarbons tested. However, when incorporated in sugar sirup, the L/D-50 was approximately 16.0 mg. per bee. This amount was contained in about one-third of the bee load of a dilution of 1-1040, which would indicate that a dilution of 1-5000 would be comparatively nontoxic to bees. When confined in a wood and wire cage which had been sprayed with a 5 per cent solution of DDD in acetone, and allowed to dry in the sun before the bees were installed, all bees were killed by contact with the cage at intervals over a period of 4 weeks. On the first day the bees died within two hours but on the fourth week the lot of bees inserted died in approximately 48 hours. DDT and DDD have been found to give better control of tomato insects than arsenic and should become the logical substitute for calcium arsenate in the control of tomato insects.

The **phosphates** comprise another relatively new group of insecticides that will undoubtedly replace some of the older chemicals in controlling many types of insects. On the whole, they are highly toxic to honeybees as contact insecticides, stomach poisons and sometimes through fumigant action.

**Hexaethyl Tetraphosphate or HETP:** A three per cent HETP dust

killed 31 per cent of bees when dusted on them through the wires of a cage, the bees dying within 48 hours. A sample of 50 per cent HETP in ethyl acetate when diluted with 20 per cent sugar sirup killed 71 per cent of the bees at a dilution of 1-12,800 in 48 hours. A dilution of 1-25,600 killed only 25 per cent of the bees in 48 hours.

Two samples of a 100 per cent or technical grade of HETP were used in more extensive tests. It was found that the L/D-50 fell between .24 mg. and .34 mg. per bee. Under field conditions, this L/D-50 would be somewhat less because some of the bees that recovered were incapacitated soon after being fed lesser amounts. A dilution of 1-200,000 killed 65 per cent of caged bees within 48 hours. Loss of toxicity of the solutions was in direct proportions to their dilutions. A concentration of 1-800 killed 64 per cent of the bees when the solution was 3 days old whereas it killed 100 per cent when freshly made. A dilution of 1-200,000 lost its toxicity to bees after standing for 24 hours.

**Tetraethyl Pyrophosphate or TEPP:** A series of dilutions from 1-1000 up to 1-2,000,000 were fed to bees and the L/D-50 was found to be .075 mg. per bee. A dilution of 1-1,000,000 killed 90 per cent of the bees in 48 hours while 1-1,500,000 killed 43 per cent in 24 hours.

TEPP also showed considerable toxicity to bees on contact over a period of 2 days at a concentration of 1-800. Bees died within 48 hours when confined in cages sprayed with a 5 per cent solution and dried before the bees were inserted.

The solutions of TEPP lost their toxicity in a manner similar to solutions of HETP. A dilution of 1-512,000 killed 100 per cent of the bees when newly made but only 10 per cent of a new lot of bees the following 24 hours.

**Parathion—(O,O-diethyl O-p-nitrophenyl Thiophosphate):** A new chemical on the American market, still in the experimental stage. This chemical was originally referred to by the code numbers E-605 and 3422. It appears to be highly toxic to bees and might find wide use as an insecticide for the control of a number of insects. It killed bees within 25-30 minutes when exposed to a waxed paper sprayed with a 2 per cent solution. A cage sprayed with a 1 per cent solution of parathion in 95% alcohol and allowed to

dry, killed all lots of bees placed in the cage between November 25 and December 19, the bees becoming moribund in from 20 minutes to 1 hour. When cages of bees were placed above this sprayed cage, but not in contact with it, the bees died in from 3½ to 6½ hours. Bees placed in the sprayed cage on the day it was sprayed and left there for but one minute, became moribund within an hour after being placed in an uncontaminated cage.

When dissolved in 95 per cent alcohol and then mixed with 20 per cent sugar sirup, and fed to bees, the L/D-50 was approximately .07 mg. per bee. As with other phosphates, the effect of the median dose was such that many of the bees that survived would have died under natural conditions.

**The future outlook:** From a review of the effect of the different chemicals on bees, it would seem that many of the newer chemicals might be quite hazardous to bees and some of them could be if they are applied to plants in bloom in a manner that would permit bees to acquire the amounts indicated as lethal to bees under laboratory conditions. However, both the hydrocarbons and the phosphates have proved effective against specific insects when used in only small quantities as compared to the amounts needed of the less efficient arsenicals. In tomato insect control, for example, 3 applications of 1.5 pounds of DDD per acre will give better control than 21 pounds of calcium arsenate or a total of 4.5 pounds of DDD as against 63 pounds of arsenic. It is highly probable that if only .5 pounds of calcium arsenate need be applied to give economic control of tomato insects, the damage to bees and to livestock would be far less than at present and no greater than that expected for DDD.

DDT has now been applied to potatoes and to deciduous fruit trees, to cotton and various other crops without causing the death of any colonies in or near the fields treated. The populations of colonies have been reduced when either 5 to 10 per cent DDT dusts have been applied to alfalfa in full bloom but the brood of colonies have not been noticeably injured. Chlordane has been applied to alfalfa fields for grasshopper control, again in amounts approximating that of DDT, and without causing noticeable injury to colonies.

The Arizona Experiment Station  
(Please turn to page 143)





# The Honey Plant Garden

A Collection of Plants Brought Together For  
the Study of Bee Pasture Problems

By Frank C. Pellett

(Above) Honey Plant Garden Atlantic, Iowa—Photo by A. M. Henrickson.

(Below) *Lespedeza bicolor* grows higher than a man's head and gives a good honeyflow in late summer.



LETTERS have come to this office from many states and from several foreign countries asking for more information regarding the test garden maintained by the American Bee Journal at Atlantic, Iowa. Several correspondents have indicated that they plan to establish similar gardens and want suggestions for making the most of such study.

This project was started as a hobby by the writer in 1907 and for many years amounted to but little more than planting an occasional specimen of something which was reported to be attractive to the bees. One of the first things planted was the shrub from China, "*Vitex incisa negundo*," brought to this country by Frank N. Myers the plant explorer for the U. S. Department of Agriculture. When it came into bloom the bees swarmed over the flowers in such numbers that it was reported to this magazine and since that time it has been planted far and near by the beekeepers.

Hobbies have a way of growing and this one offered a fascinating field of investigation. Soon a five-acre tract of cutover woodland was set aside for a wild flower preserve. Wild

flowers from far and near were planted until there are millions of blooms in early spring. The Virginia waterleaf, one of the best of spring honey plants, has made itself so much at home that it now is well distributed over the entire tract and gives the bees a big boost at the close of the dandelion harvest.

No extensive effort was undertaken until the cooperative experiment with disease resistance was set up at the farm in September 1934. At that time an experimental apiary was established where Dr. O. W. Park and F. B. Paddock of the Iowa State College of Agriculture and the writer were to see what could be learned about disease resistance. This gave an opportunity to pay more attention to honey plants at the same time and the Zofka clover was brought from Europe. Much interest was shown in the Zofka clover which is a red clover with short corolla tubes. The bees worked the flowers freely and seed was set abundantly but the plants all winterkilled at the close of the second season.

When the resistance experiment was enlarged to include several other state experiment stations under

supervision of the Bureau of Entomology, there no longer seemed to be any reason for a private firm to take part and the American Bee Journal withdrew. Research in disease resistance and stock improvement is now being done by Dadant & Sons, at Hamilton, Illinois.

Since that time the writer has devoted his entire attention to the honey plant garden and it has been increased in area each year until there are now about ten acres devoted to the project, including the original wild flower preserve.

### The Objective

The object of our search is to find a good honey plant which may be used for any purpose for which plants are needed. If something is needed to hold the face of a terrace against erosion, or a tree for roadside or park land planting, or a perennial for the ornamental garden, or a legume for the farm rotation, we want to be able to recommend a suitable plant which is also a good source of honey.

This search requires the study of hundreds of plants from far places and is of greatest value for the immediate region since similar study should be made for every climatic area. Plants behave so differently on different soils and under different environmental conditions that things which do well for us may do poorly elsewhere.

To save space only a few specimens of new plants are used. In case of trees or shrubs perhaps only one. When such a plant attracts the bees in large numbers, in spite of the competition of many others in bloom at the same time, a larger plot is established. If the larger plot indicates that the plant may be important as the source of honey a field test with much larger area is planted. Thus

our first birdsfoot trefoil was only a small bed. When the bees visited the flowers more freely than the alpha sweet clover, a field test was made. This field still stands after ten seasons. It has demonstrated to many visitors that birdsfoot trefoil is a valuable new addition to Iowa forage crops.

Survival plots demonstrate the ability of a plant to compete with other plants and maintain itself without attention. This is important in deciding what plants can be used for roadside and wasteland planting. Marjoram growing with clover and bluegrass not only maintains itself but makes a better stand each season over a ten-year period.

In one plot about fifty native plants were brought from the prairies and left to grow as nearly as possible in the way that nature planted originally. Some have crowded out the weaker ones but have served to demonstrate the ability to survive against competition.

The story of one after another of the more promising plants has been told in this magazine from time to time. In October 1937 we told the story of Zofka clover. In December 1941, appeared the account of Wagner pea and in December 1940 and December 1943 the subject was anise-hyssop. The lespedezas, mountain mint and several others have appeared.

Many others are under observation, whose story remains to be told and

these we expect to introduce to our readers as fast as we know enough about them to give authentic information. Of greatest interest appears to be the new clover from Russia described in the January, 1948 issue of this magazine.

To one who wishes to start a test garden we would suggest that the mint family is especially promising. Of the nine species of *Nepeta* that we have tried eight have proved to be very attractive to the bees. The best known is the familiar catnip which has long been famous as a bee plant. Many of the *Salvias* or sages are equally good. Most of the clovers yield nectar freely and any clover which will succeed in your locality is worth a trial. The cleomes, echinops and polygonums are groups offering real promise. There is always a chance that well-known bee plants will do poorly in a new locality. The only way to be sure as to what is good is to try it under your own conditions.



(Top right) The Wagner pea is a long lived and deep rooting legume that succeeds on poor and rocky land. Its story was told in this magazine in December, 1941.

(Bottom right) Field test of mountain mint, a promising source of essential oil.

(Bottom left) Frank examines the plot of Chapman honey plant. This plant enjoyed a boom among the beekeepers of fifty years ago.





Mr. George V. Hamilton, of Swansea, Wales, Great Britain.

(Left) Mr. Hamilton's queen rearing yard. The building on the right is his work shop.

## Meet a British Beekeeper

By

Roswell H. Beardsley

I would like to have you meet George V. Hamilton, a part time beekeeper in Swansea, Wales. He has been captain of the Swansea pilot boat since he gave up going to foreign ports over twenty years ago. We find his letters interesting and we would like to share with you some of his comments and experiences in beekeeping.

In his country, a colony of bees cost \$36.00; queens sell for \$5.00 to \$6.00; bees on eight frames bring \$22.00. When he can get lumber he makes his own hives.

Most of the bees in his area are in double-walled hives. It is thought that they winter better in them as the climate is damp. But Mr. Hamilton keeps his bees in single-walled hives and so far has not lost because of it. He finds as we in Wisconsin do, that plenty of stores and bees make the best winter cover. He uses a full bottom entrance in winter without top flight holes.

His district is close to the sea, restricting flight in that direction. It is usual, with their winters, to see frequent cleansing flights. Activity usually starts in March and the fruit bloom of April builds colonies for

the clover in mid-June to mid-July. The average surplus is about thirty pounds, selling readily at sixty cents a pound.

There are two schools of beekeepers: the old fashioned ones who believe the double-walled hive best and that a single brood chamber of ten frames is enough for any queen and the modern beekeepers who use two brood chambers and the American type hive (which I presume to be like the Modified Dadant). Quilts, stout canvas with grain sacks on top, are used both winter and summer, often a fine hiding place for moth.

American foulbrood is a significant disease there, although not very prevalent in Mr. Hamilton's district. Bee association members are compensated for stocks destroyed because of disease. Members pay about \$1.25 a year and each colony destroyed is replaced by a nucleus. This also covers third party risks up to \$4,000. In this they are ahead of us.

They also have Acarine infestation from tracheal mites which we can well hope to do without. It is prevalent but can be prevented and stopped if taken in time.

He writes: "Swansea played a big part in the invasion of France and

we had thousands of your boys here, training on our beaches, and believe me it was heavy training. We found them a splendid lot of boys, generous to a fault. They have now left us and some never reached their homes.

"I have just drawn my spring sugar allowance (5 lbs.) and won't get more until fall. If we get a wet period during the fruit flow, I am doubtful if they will pull through. The weather is settled at the moment (Feb. 13, 1947), quite mild, no wind, but overcast. Yesterday I noted cleansing flights. One colony wasn't flying; no food. Made up a soy flour mixture and fed two pounds of sirup to them. They were certainly excited.

"When I finish up working, about ten years from now, I want to build up to about one hundred colonies if my health is good. That should bring me about four dollars a week, averaging it over a five year period, and figuring the good years with the bad.

"I have spread my bees around my district, hoping to get a better average, and I get around to them on my bike as the country is fairly flat and the roads are good, still I don't think I will get thirty pounds this year . . . The square hive is used by most





A chapel on an old private estate, now vacant. Mr. Hamilton has three colonies behind this building. Intends to put them on the roof during the winter, as there is a two-foot wall all around.

(Right) Outapiary, six stocks. Notice the architecture of the buildings in the background.



of the modern beekeepers, made on the American principle; without double ends it would hold thirteen frames.

"If the scientists could shift the course of the Gulf Stream from the British Isles they would have my eternal gratitude. It is the Gulf Stream, I understand, that causes our summers to be so wet. It is one of

the few things that comes from the U. S. A. that I don't care for.

"Beekeepers tell me that it has been the worst year in living memory. The general harvest also is in a poor way. Much of the hay is still uncut (August 1) and much of what was cut has rotted in the fields . . ."

The last two years have been very poor; 1946 the worst beekeepers have

seen for many, many years. Like all true beekeepers, they are putting these bad years behind them, and they are looking ahead to the good crop they will get next year. This bad summer weather can't last always. They will get a good year again. We hope they do; and soon.

Wisconsin.

## Alberta Notes

The following are the officers of the Alberta Honey Producers' Cooperative: Peter Kowalski, Bon Accord, president; Directors, Alan Graham, Coaldale; M. J. Zeeze, Dapp; W. R. Sterling, Westlock; P. A. Sicotte, Falher; H. T. Philpott, Brooks; W. G. leMaistre, Edmonton; S. M. Shafer, Ranier.

There are now 11,000 beekeepers in the province, operating 75,000 colonies, 3,000 colonies above 1946. A record of 6,725,000 pounds was made in 1947, despite low yields in southern Alberta.

New officers of the Alberta Beekeepers' Association: H. T. Philpott, Brooks, president; P. Kowalski, Bon Accord, vice-president; W. G. leMaistre, secretary-treasurer, Edmonton.

Dominion Apiarist Gooderham reports that penicillin does not appear to be useful to beekeepers and sulphathiazole only under certain conditions. There also seems to be a minute carryover into the honey which may affect allergic people. DDT seems safer than arsenical sprays; 2,4-D varies in safety according to its concentration.

F. R. Armstrong, Dominion Honey Specialist, confirms the Co-ops as the big stabilizing influence in the honey business.

H. T. Philpott, of Brooks, keeps 700 colonies in 10 acres until they are ready for the outyards. He uses only nine frames in each super through the four stories of each hive. He confines each queen to two brood chambers and extracts each super as it is full.

E. H. L. Knechtel, Calgary, with many years' experi-

ence, recommends a pack of leaves for winter on three sides and on top, just tar paper in front.

Mrs. Roy M. Hanlan, South Edmonton, Alberta.

## Iowa Association

Newly elected officers of the Iowa Beekeepers Association are, Earl Robinson, president; R. L. Griggs, vice-president; F. B. Paddock, secretary; Wm. H. Collins, treasurer; Reva Todd, assistant and Newman I. Lyle, Glenn O. Jones, John G. Jessup and Joe Herman directors. Lyle represents the beekeepers on the Horticultural Board.

Prof. H. M. Harris, of Iowa State College, reviewed the situation concerning the use of spray poison in the control of insect pests and the protection of honeybees. The fact that entomologists now recognize the importance of the bees in pollination insures that every effort will be made to find effective control measures without injury to the bees.

## Texas Production

Production of honey in Texas for 1947 is estimated at 13,140,000 pounds, 20% more than in 1946. This sharp increase is the result of a record all state average of 45 pounds to the colony with seven per cent more colonies. The increased hubam clover acreage over the state contributed much to the increased nectar flow.

Hornady Austin.

# Bee Rock, California

By

Clifton G. Reynolds, D. Th.

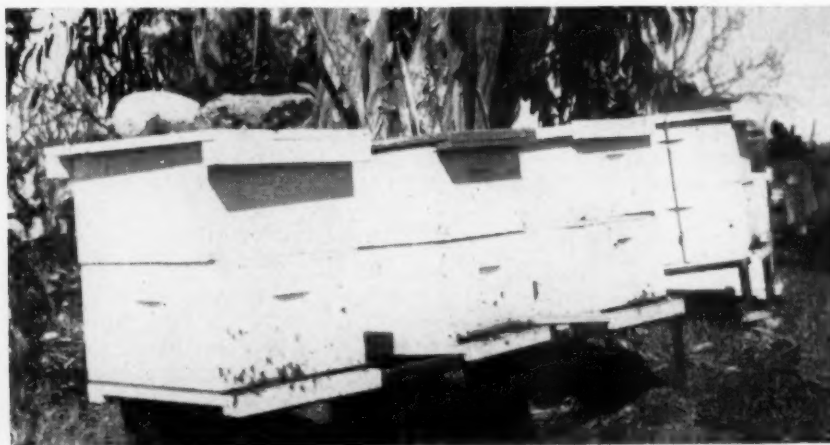
**S**TALAGMITIC formations do not interest the average apiculturist as they do geologists, but we believe the following true story will interest the beeman as well as the student of rock formations. The interest centers about how the stalagmite cone is formed. Some geologists may tell us stalagmitic formations are caused by water, saturated with carbonate of lime, dropping on the floor of a cavern. Wise as this explanation may seem, it hardly explains the presence of stalagmites in caverns where water does not exist. The more advanced study of geology gives us a more intelligent answer.

The discovery we are now relating happened about fifty years ago but has never appeared in print. For this reason, we are giving exact names and places for the benefit of anyone who cares to check our account. The place is Macanaha Canyon or Gulch in Siskiyou County, California; with Mount Shasta towering above it, forty

miles away. To be more exact, it is located on government land, in the Klamath National Forest and is centered around a stony formation known as "Bee Rock." The nearest post office was then known as Etna Mills. It is now known as Etna, a thriving little town of about five hundred inhabitants.

Bee Rock is a bald formation rising ninety feet out of the stony floor of the canyon. On the top is a lone juniper tree. The roots of this tree have sought out cracks in this barren formation and has set its roots with such firm effort the trunk of the tree is raised several inches above the stone. This tree formed the means of making further investigations.

About twenty-five feet down from the top of this masterpiece of nature was a small crack in the face of the rock. It was about eighteen inches long and one inch wide at its widest point. For centuries honeybees had come and gone through this crack.



A modern apiary placed near Eucalyptus winter pasture in California.



Because of its inaccessible location, bees had defied even the cunning ingenuity of adjacent Indian tribes as well as Spanish and American pioneers. It was a straight drop from the top to this opening and sixty-five feet from there to the rocky bottom.

The Sagasa, Palmer, Crocker, Boyd, Hendricks and Denny families were homesteaders in this vicinity, while the Walford, Facey, and Messner families were not far distant. But this account centers around the activities of the Sagasa family who lived nearest to the rock.

Joe Sagasa, the son, then about twelve years old, was a strong enterprising product of western pioneer life. He had great confidence in his dad and when he told his mother confidentially that he knew his dad could get the honey from that rock, his dad decided not to let his boy down. One moonlight night they went together to the rock. Dad Sagasa took a half hitch about the juniper tree and lowered his son over the edge. Joe ignited some sulphur he had jammed into the hole and then closed the crack with wads of paper.

Several days later father and son again visited the rock. This time Dad Sagasa fastened a rope securely to the juniper tree and climbed down to the saddle he had made in the end of the rope. Joe watched his father from the rocks below. He knew his dad would work through that stone. At noon Mother Sagasa brought lunch. The next day the work continued but by night a small opening had been made. It now remained to

(Please turn to page 147)

# National Federation Resolutions

As a climax to a live-wire meeting the following resolutions were approved and acted upon by the National Federation of Beekeepers' Associations at their recent Salt Lake City meeting:

## Resolution No. 1

Telegram sent to Jesse Gilmer, Administrator, Production and Marketing Administration expressing appreciation for the consideration by the government of purchase of fifteen million pounds of strong-flavored honey for European relief. The administration was also informed that the industry needs aid in marketing several million pounds of this honey still remaining.

## Resolution No. 2

The Federal Trade Commission was informed that the reputation of domestic honey is being damaged by the large volume of imported honey of inferior flavor. The Commission was requested to promulgate regulations making it mandatory for packaged imported honey, either straight packs or blends with domestic honey, to include on the label either the country of origin or if a blend of honey from several countries, at least the word "imported."

## Resolution No. 3

Realizing that an accurate definition of honey is basic to any improvement in honey grades, the Food and Drug Administration was requested to hold a public hearing for the purpose of developing a more accurate and more serviceable definition or standard of identity for honey than the ones now existing.

## Resolution No. 4

The American honey industry is now producing honey in excess of the current rate of consumption. This honey for the most part is of a type which is not suitable for table use but is generally suitable for baking purposes. Whereas the baking industry is capable of absorbing enormously increased quantities of honey should new formulas be created, the National Federation urges the U. S. Department of Agriculture that from the funds appropriated by the Congress for research work in the marketing of agricultural products the sum of \$25,000. be allowed for

research work in the use of honey in commercial baking. It was also requested that such funds be allocated for such research project to be carried out by the American Institute of Baking, of Chicago, Illinois, or other private research organization of equal capability and experience. The purpose of the project to be the improvement of old formulas and the creation of new ones within the field of the commercial baking industries. A copy of this resolution has been sent to the Administrator of the Research and Marketing Act.

## Resolution No. 5

Experience has shown that it is essential to the best interests of the honey industry that there be one organization to represent all phases of beekeeping. Since the American Beekeeping Council has ceased to function as an organization which truly represented all phases of the honey industry it was recommended to the Executive Committee of the National Federation that its scope, purpose, and organization be broadened and expanded to the extent that it shall become representative of all phases of the bee and honey industry.

## Resolution No. 6

The following resolution of the Southern States Beekeeping Federation was adopted as an official act of the Federation meeting: "Be it resolved that the Southern States Federation in convention assembled request the United States Department of Agriculture to publish and make available to beekeepers all information they have pertaining to the beekeeping industry."

(Right) Tracy R. Welling, Commissioner of Agriculture of the state of Utah.  
(Below) Dr. J. E. Eckert, Division of Entomology, University of California, both addressing the convention.



## Resolution No. 7

The directors of the Agricultural Experiment Stations of the states of Utah, Wyoming, Colorado, California, and Louisiana, and the Secretary of Agriculture of the U. S. Department of Agriculture were requested to establish an adequate research program to control and eradicate European foulbrood which for a large number of years has caused serious losses of colonies of honeybees in the intermountain, western, mid-western, and eastern states. It was suggested that a separate fund of at least \$25,000. per year be established for the above designated purpose.

## Resolution No. 8

The consensus of opinion at the meeting was that contributions to the support of the Federation should be on the basis of \$5.00 for each fifty colonies or fraction thereof of bees owned or operated, and 0.1% of gross annual sales for those in any other branch of the beekeeping industry. This support would continue until some more satisfactory method of financing can be devised and perfected.

## Resolution No. 9

Widespread distribution of Nosema disease has caused serious losses in colonies throughout the southern, northern, and midwestern states. Losses of worker bees so weaken colonies that they are ineffective in pollination and seed production of agricultural crops as well as large direct losses to beekeepers in honey crops. In view of the above facts it was requested that directors of the Agri-  
(Please turn to page 144)







A handy overhead storage loft over the work bench in the honeyhouse of Clarence C. Langley (See "I Like Beekeeping Because . . ." in the February number, page 80).



Pasque Flower, among the first flowers of spring on the prairies; important source of early pollen for the bees of the settlers from Alberta to Manitoba and south to Texas. Many call it prairie crocus.



A group of English hives with overlapping outer shells, picturesque in many an English garden. Commercial beekeepers now often use the American type hives, frequently of square dimensions.

## Sodium Flouride On Bees

On page 429, September, "The Effect of Sodium Flouride on Bees," it is stated that "honeybees are not seriously affected by this material, although it is toxic to other insects and animals."

This is so contrary to the findings of certain entomologists that it should not remain unnoticed. The article stated that sodium flouride is cryolite. Cryolite is sodium aluminum flouride, and it is a natural product found only in commercial quantities in Greenland and imported in large quantities. Sodium flouride is a manufactured product which cannot be safely used on the foliage of trees or vegetables. It is very toxic to certain insects, roaches, ants, and the like.

There are so-called synthetic cryolites which approach, and in some cases equal the chemical composition of natural cryolite and which vary in solubility and toxicity.

In 1935 a study was made of the insecticidal properties of cryolite and its safety factor to foliage by Dr. Irene D. Dobrosky entomologist, with whom I collaborated. In an article in the Jour. Econ. Ento. (June 1935, p. 627) Dr. Dobrosky says, "Since bees vary greatly in their responses to temperature, light, time of day, and time of year, all these factors must be noted. The experiments reported were performed in October when bees behave normally.

Arsenates, produced 50% toxicity in 24 hours for lead arsenate; in 22 hours for magnesium arsenate; and two hours for both calcium and sodium arsenate. Sodium flouride showed 50% toxicity in 4 hours; natural cryolite in 8 hours and natural cryolite with lead arsenate 1-1 in 8 hours.

Paul M. Eide, Washington Agricultural Experiment Station, showed these results with cryolite when bees were fed 1-800 in a 50% honey and water mixture, all were sick in 72 hours; 65% were dead in 24 hours; 75% dead in 48 hours; 85% dead in 72 hours.

It is evident that cryolite, either natural or synthetic, is not a safe insecticide to use when honeybees may get it.

Veeland Chemical Laboratory  
C. D. Veeland,  
Paterson, New Jersey.

## New California Bulletin

"Beekeeping In California" is the title of a brand new December 1947 bulletin issued by the College of Agriculture at the University of California, Berkeley, California.

The bulletin is by Dr. J. E. Eckert and contains some 96 pages excellently gotten up and well illustrated with cuts.

The bulletin runs the gamut from the instructions to the beginners through apiary sites, nectar and pollen plants, races, life history, cycle activities, beekeeping equipment, colony and hive manipulations, package bees, apiary records, queen rearing, feeding, disease and enemies as well as honey packaging, care, and sale.

Dr. Eckert has done an excellent job in the compilation of this booklet and it should prove highly interesting and instructive to all types of beekeepers and prospective beekeepers in California.

We assume that copies of this bulletin are available through the extension department of the Department of Agriculture, Berkeley, California. The number of the bulletin is Circular No. 100.

## Pardon, Uncle Sam— And Dr. Park

In the January number, page 26, in "Man's Best Friend," are some fine illustrations. The three bees at the top of the page are pictures from Dr. O. W. Park, Iowa State College, Ames, Iowa. The two pictures at the bottom of the page are from the United States Department of Agriculture, through the courtesy of James I. Hambleton.

Credit lines were sent to the printer, as a part of the titles for the pictures after the page had been submitted for proof reading, leaving it to the printer to insert the titles and read them before printing. He did but left out the credits. As the Japanese said after the bombs were dropped "So sorry."

## Vancouver Island Officers

At the annual meeting of the Vancouver Island Association the following officers were elected: G. E. Goodman, reelected president; D. H. Heyer, reelected vice-president; G. V. Wilkinson, treasurer.

David Scholes, British Columbia

## QUEENS-Packages

## 3-Banded Italians

ASSURE EARLY DELIVERY.

10% BOOKS ORDER.

PRICES AS FOLLOWS:

2-lb and young laying queen	1-25	26-up
3-lb. and young laying queen	\$4.50	\$4.25
4-lb. and young laying queen	5.65	5.40
Queens (Postpaid)	6.80	6.55
	1.25	1.15

Queenless packages, subtract price of queen. Efficient—Rapid—Honest Service.

**Eells Honey & Bee Co. : Houma, La., U. S. A.**  
"In the Sunny South"

## 1948 Package Bees & Queens

PRICES:	Queens	2-lb. with queen	3-lb. with queen
1 to 49	\$1.35	\$4.50	\$5.75
50 to 99	1.25	4.25	5.50
100 up	1.00	4.00	5.00

Above prices will hold unless cost of sugar is materially increased.

**HOMAN BROS. : Rt. 2 : Shannon, Miss.**

## FOREHAND'S

## Italian Package Bees and Queens

WE ARE NOW BOOKING ORDERS FOR THE COMING SEASON.

2-lb. packages with queen, any number	\$4.00
3-lb. packages with queen, any number	5.00
Queens, any number	1.00

GET YOUR ORDER IN EARLY.

## HUBER FOREHAND

PHONE NO. 35079

TELEGRAPH OFFICE, SATSUMA, ALA.

"44 Years Among the Bees"

## ITALIAN BEES AND QUEENS

Package bees headed by our own strain of Italian queens which we have bred up in the past six years from disease resistant stock. EVENLY MARKED—GENTLE—REAL HONEY GATHERERS.

	Queens	2-lb.	3-lb.	4-lb.
1-24	\$1.40	\$4.50	\$5.85	\$7.20
25-99	1.30	4.25	5.50	6.85
100-up	1.20	4.00	5.25	6.50

Queenless package deduct price of queen.

**LUCEDALE APIARIES**

**LUCEDALE, MISS.**

**Brazos Valley Apiaries**  
Cameron, Texas

## Bees and Queens

**Brazos Valley Apiaries**  
Cameron, Texas

ITALIAN OR CAUCASIAN

	1 to 5	6 or more
2-Lb. bees with young queen	\$4.25 each	\$4.00 each
3-lb. bees with young queen	5.25 each	5.00 each

Over a quarter of a century in the same place, in the same business is my record.  
My motto: I will expect to do business with you again.

**H. E. GRAHAM : Cameron, Texas**

**A-B-J Ads Are Result Getters**

## Three-Band Italian Package Bees

Full weight, prompt shipment, young bees. State Health Certificate with each shipment. Live arrival guaranteed. Replacement or refund made promptly upon Receipt of Bad Order from your Express Agent.

### PRICES FOR 1948

#### With Young Laying Queens

Lots of	Queens	2-Lb.	3-Lb.	4-Lb.	5-Lb.
1 to 29	\$1.25	\$4.25	\$5.40	\$6.55	\$7.70
30 or more		4.00	5.00	6.00	7.00

If queenless packages are wanted, deduct \$1.25 each from above prices. If queens introduced add \$1.00 to the price of each package.

**JACKSON APIARIES**  
FUNSTON, GEORGIA

## Yellow Italian Package Bees & Queens

Now is the time to have your name put on our book, later might be too late, 10% now will reserve date desired. Live delivery and health certificate guaranteed. We start shipping early in April.

With young laying queen	2-lb.	3-lb.
1 to 24 at	\$4.25	\$5.25
25 to 49 at	4.15	5.15
50 up at	4.00	5.00

QUEENS, MAY DELIVERY AT \$1.25; 50 UP AT \$1.10

**PLAUCHE BEE FARM : HAMBURG, LA.**

## EPHARDT HONEY FARMS

RT. 2, BATCHELOR, LOUISIANA

### Package Bees with Carniolan Queens

MAY DELIVERY BY EXPRESS

2-lbs. bees, young laying CARNIOLAN QUEEN	\$4.50
3-lbs. bees, young laying CARNIOLAN QUEEN	5.50
Extra CARNIOLAN QUEENS	1.35

## QUEENS Fall Queens a Specialty QUEENS

You send the order; I have the queens

LEATHER COLORED ITALIAN QUEENS  
MIDDLE TENNESSEE APIARIES

1 to 25, \$1.35; 26 and up, \$1.20—From Imported Strains. 1/2 books orders. Balance before shipping. All queens clipped and by air mail at no extra cost. (All queens after June 15, \$1.00)

**J. B. TATE & SON**

1029 No. 4th St., Nashville 7, Tenn.

Telephone No. 34509M

## ITALIAN PACKAGE BEES AND QUEENS

On the same old basis—QUALITY, SERVICE, SATISFACTION—QUEENS after May 20th \$1. 2-lb bees with queen 1-24, \$4.00; 25 up, \$3.85. 3-lb. bees with queen 1-24, \$5.00; 25 up, \$4.90. 4-lb. bees with queen 1-24, \$6.15; 25 up \$6.00.

**E. J. BORDELON APIARIES : Box 33 : Moreauville, La.**

## HEADQUARTERS

FOR

### Cut Comb Packages

ALSO

### Bulk Comb Frames

with 1 1/2" or 1 3/4" ENDS and TENSION SPLIT TOP BARS for rapid and positive insertion of foundation.

Send 15c in stamps for sample frame postpaid. Write for prices.

**M. J. BECK CO.**

BOX 7

LANSING 1, MICH.

## F. E. MORRISON

### Italian Package Bees and Queens

Rt. 2, Box 103

Auburn, California

## Italian Package Bees With Queens

FOR APRIL AND MAY DELIVERY

	1 to 12	13 & over
2-lb. pkg. with queen	\$4.25	\$4.00
3-lb. pkg. with queen	5.25	5.00

Queens \$1.25 each

20% books order, balance 2 weeks before shipping date.

**J. R. N. HARBER**

BOX 381, ALMA, GEORGIA

## Southern Beekeeper

(Magazine)

HAPEVILLE, GA.

"Southern in scope—  
National in influence"

## PACKAGE BEES ITALIAN QUEENS

**J. F. McVAY**

JACKSON, ALABAMA

## GLEANINGS IN BEE CULTURE

FEATURE ARTICLES—NEWS ITEMS  
MONTHLY TALKS TO BEEKEEPERS

Subscription Rate

1 year, \$2.00; 2 years, \$3.00; 3 years, \$4.00  
in United States and Canada.

**THE A. I. ROOT CO.**  
MEDINA, OHIO



# American Honey Institute

Commercial State Bank Building,  
Madison 3, Wisconsin

**Honey for Breakfast Week** begins on Easter Sunday and will continue throughout the week of March 28 to April 4, which has been set aside for the national observance of this sweet event.

**Honey for Breakfast Week** presents an unusual opportunity for promoting year-around honey sales. Be sure to take advantage of it.

Honey fits perfectly into breakfast menus. Breakfast fruit, cereal, bread, coffee—all taste better with honey. Once people begin to enjoy Honey for Breakfast, the chances are good that they are started on a lifetime habit of the daily use of honey.

**Honey for Breakfast Week** is a good starting point.

\*\*\*\*\*

A new leaflet—just in time for **Honey for Breakfast Week**. Prepared especially for distribution beginning in **Honey for Breakfast Week**, but effective for year-around use, it is called **HONEY FOR BREAKFAST**.

It really has to be seen to be fully appreciated, but you are sure to like the six pages carried out in bright shades of pink and blue, which are especially appropriate to the attractive front page design: a little girl and boy enjoying Honey for Breakfast.

On the inside pages are tips for nutritious breakfasts, recipes for honey breakfast dishes, and seven menus for a whole week of good honey breakfasts.

These leaflets are good publicity for honey. You will surely want to take advantage of them. But do place your order soon. There's no time to lose if you wish to have them in time for **Honey for Breakfast Week**.

They are yours for \$1 per hundred, postpaid. Order today.

\*\*\*\*\*

Remember that Honey for Breakfast Week stickers are another good form of publicity. Measuring 1 1/2

by 2 inches and printed in yellow and brown, they are both timely and useful. Stick them on every jar or pail of Honey and attach them to your letters and packages. They are real attention-getters.

Available in two designs at 25¢ per hundred, these stickers are outstanding for excellent, low-cost honey publicity. Be sure to order without delay for delivery before Honey for Breakfast Week.

\*\*\*\*\*

One of the outstanding food delicacy stores in New York City specializes in preparing packages of food to be sent to the hungry overseas. Honey is included in many of the boxes as a nutritious treat that will be warmly welcomed.

Spring is on the way. Many beekeepers are taking advantage of the return of warm weather and visiting the Institute. The Institute staff welcomes them, pleased that busy beekeepers take this interest in the organization which is busy, too, working constantly for their benefit.

\*\*\*\*\*

One of the speakers at a recent meeting was an advertising expert. Driving home a point in his talk, he held up a copy of **NEW FAVORITE HONEY RECIPES**, the 56-page book prepared by the American Honey Institute. He then pointed out what excellent publicity this book provides, and what good work it is doing for the industry. It is a real aid in selling honey.

\*\*\*\*\*

A new expanded program of activities, including professional advertising of honey has been undertaken by the American Honey Institute.

In order to solicit the increased support which this program demands, letters will soon be sent to beekeepers everywhere. The Institute hopes that they will join in sponsoring this program, for its success depends on the cooperation of everyone in the industry.

## 1911 DUPUIS 1948 Package Bees and Queens

We solicit large and small orders.  
THREE-BANDED ITALIANS

95% Baby Bees and 5% Teachers  
at following prices

2-lb. package with queen	\$4.50
3-lb. package with queen	5.85
4-lb. package with queen	7.20
5-lb. package with queen	8.50

**DUPUIS APIARIES**  
BREAUX BRIDGE, LA.

## AMERICAN RABBIT JOURNAL Shows the Way to Success...

Gives the latest news and views of the rabbit world—an illustrated monthly magazine of general and educational features. One year \$1.00; three years, \$2.00; sample 15¢.

**AMERICAN RABBIT JOURNAL**  
Dept. S. Warrenton, Missouri

HIGH QUALITY, THREE-BANDED

## Italian Bees and Queens

Quantity	1-49	50-99	100-up
2-lbs. with queen	\$4.25	\$4.15	\$4.00
3-lbs. with queen	5.40	5.30	5.15
4-lbs. with queen	6.55	6.45	6.30
5-lbs. with queen	7.80	7.70	7.65
Extra queens	1.40	1.30	1.20

Try these bees for they will please.  
10% books order, balance 10 days before shipping date. Live delivery guaranteed. Send me your order. I still have open shipping dates for early April.

**CARLUS T. HARPER**  
R. NO. 1, NEW BROCKTON, ALA.

Every mail brings in more and more orders for

## "Silverhide" Ready-mixed Aluminum Paint

from beekeepers, located all over the U. S. A. They have found that it really keeps their hives from 10 to 15 degrees cooler in the summer and 10 to 15 degrees warmer in the winter. Write for our circular and prices.

**TUNG OIL PAINT MFG. CO., Inc.**  
BOX 83 ORANBURGH, N. Y.

## Italian Queens and Package Bees

FULL WEIGHT PACKAGES OF  
YOUNG BEES AND QUEEN

	1 to 24	25-49	50 up
2-lbs. each	\$4.25	\$4.05	\$3.95
3-lbs. each	5.25	5.05	4.90
4-lbs. each	6.35	6.15	6.00
Queens, each	1.25	1.20	1.10

We guarantee Prompt Service, Live Delivery and a Health Certificate with each order.

**ALVIN J. DUCOTE**  
HAMBURG, LOUISIANA

## Queens-Italians-Queens Northern Raised —Northern Bred

These Hardy—Selected Queens are from heavy honey producing stock and no better Queens are produced. Booking orders now. June 1st. to November 1st, each \$1.50. Cash with order. Airmail service.

**BAKER'S APIARIES**  
GLENCOE, ILLINOIS

## DR Queens and Package Bees

By continuous annual selection the DR stock of the Iowa Beekeepers' Association is improved yearly.

Quantity	Queens	2-lb. pkgs. with queens	3-lb. pkgs. with queens
1 to 9	\$1.65 each	\$5.20 each	\$6.20 each
10 to 49	1.50 each	5.00 each	6.00 each
50 to 99	1.40 each	4.75 each	5.85 each
100 and up	1.35 each	4.65 each	5.75 each

**Iowa Beekeepers' Association**  
STATE HOUSE, DES MOINES, IOWA

NORTHERN CALIFORNIA

## Package Bees & Queens

Large or small orders accepted.  
Write for prices.

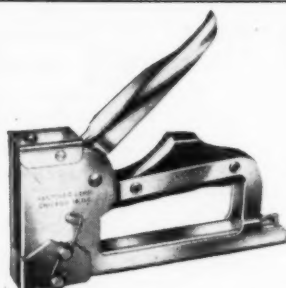
**CLIFF THOMAS**

COTTONWOOD, CALIFORNIA

(Formerly R. E. LaBarre Apiaries)

## Tacks Screen to

TACKS NEAT AS  
A PIN



## Shipping Cage Fast

EXACT CROWN  
SIZE 5/32"

### AUTOMATIC NARROW CROWN TACKER

A new narrow crown gun tacker especially made for the bee industry—A lightning fast method of attaching wire screen to queen bee shipping cages—At least twice as fast as the method now employed—ready for immediate shipment—Write for further information.



### FASTENER CORPORATION

876 FLETCHER ST.,

CHICAGO, ILLINOIS

## BEE SUPPLIES

If you are in need of bee supplies, send us a list of your requirements and we will quote you our best prices.

**A. H. Rusch & Son Co.**  
REEDSVILLE, WISCONSIN

## Italian Queens and Package Bees

We are now booking orders for 1948 delivery, only 20% with order, balance 10 days before shipping date. We guarantee live delivery and health certificate with each shipment. Prices as follows:

2-lb. package with queen	\$4.00
3-lb. package with queen	5.00
4-lb. package with queen	6.00

### Clover Bee Farms

HESSMER, LOUISIANA

## Modern Beekeeping

The picture magazine of beekeeping. We show you with pictures how to do the job easier, quicker, and better. Special inventor's page.

1 yr. \$1.50; 2 yrs. \$2.50; 3 yrs. \$3.25

**MODERN BEEKEEPING**  
PADUCAH, KENTUCKY

## BREAD AND BUTTER QUEENS

HOLLOPETER reared Northern Bred-for-business strain Italians. Young laying queens, May 20-June 20, \$1.25; June 20-November 20, \$1.00.

### WHITE PINE BEE FARMS

ROCKTON, PENNSYLVANIA  
Commercial Queen Breeders Since 1911

## '48 Prices on PACKAGE BEES AND QUEENS

	1-10	10-50	50-100	100 up
2 pound	\$4.50	\$4.30	\$4.10	\$4.00
3 pound	5.50	5.30	5.10	5.00

Queens: Untested—\$1.30; Tested—\$2.00

Small orders cash in full. Large orders 20 per cent deposit. Balance to be received 2 weeks before shipping date.

Packages shipped F. O. B. Sabinal, Texas

## VICTOR HONEY FARMS

SABINAL, TEXAS

**Renew Your Subscription NOW**

## Canadian Bee Journal

Canadian beekeepers have much in common with their neighbors in the U. S. If you are interested in bee activities "North of the Border," send us your subscription NOW. Subscription price, \$1.25 per year in U. S. A.

## CANADIAN BEE JOURNAL

54 Bloor St. West, Toronto 5, Ontario

For Better Beekeeping

Use

**DADANT'S  
FOUNDATION**

FIRST CHOICE of EXPERT BEEKEEPERS

AMERICAN BEE JOURNAL

## The Present Relation of Agricultural Chemicals to Beekeeping Industry

(Continued from page 131)

Bulletin 207, Beekeeping Near Cotton Fields Dusted with DDT, should aid materially in bringing about the substitution of DDT for arsenic in that state, as well as in other states where the insect problems on cotton are the same. Favorable tests have also been conducted with DDT on cotton in Texas, California and in other states. DDT has largely replaced the arsenicals in many of the deciduous fruit growing regions without causing any appreciable loss of bees.

It would seem reasonable to conjecture, therefore, that if the hydrocarbons replace the arsenicals, as now seems probable, and if the hydrocarbons are continued to be used in minimum quantities as at present, the hazards of chemical poisoning through their use may be negligible in comparison to the serious losses now occasioned by the use of arsenicals.

The phosphates have not been used extensively enough in the field to give us an answer to their probable effect on beekeeping. Dead bees have been observed under the trees experimentally treated with phosphate sprays or dusts. The phosphates will be used more extensively during 1948 when additional observations will be made as to the apparent effect on bees and other beneficial insects.

**Improvement in equipment:** Within the past few years, an increasing amount of attention has been given by agricultural engineers and entomologists as well as by commercial pest control operators and growers and equipment manufacturers to the need for eliminating the hazards of drifting poisons. It is a known fact that poisonous dusts cannot be applied to commercial plantings by either ground rigs or by airplanes without causing a substantial drift, frequently as much as 50 per cent or more of the material applied, over adjacent territory. The obvious solution to the drifting poison problem then, is to either eliminate the dusts and use sprays instead, or use poisons that are not toxic to bees, livestock or injurious to other property. The elimination of all arsenicals would be a definite improvement in the field of insect control, as well as in preventing the hazards of applying poisons. But since even more toxic

## Package Bees and Queens

Bred for Quality and Honey Gathering. Our bees have produced where others have failed.

### PRICES FOR 1948

	Queens	2-lb.	3-lb.	4-lb.
1-24	\$1.40	\$4.50	\$5.85	\$7.20
25-99	1.30	4.25	5.55	6.85
100 up	1.20	4.00	5.25	6.50

You get better bred queens, over weight packages, baby bees and prompt delivery of every order.

Telephone 2546, Livingston, Alabama. Telegraph, Livingston, Alabama

Our Motto—"Once a customer always a customer."

**C. W. BAKER**  
SUMTERVILLE, ALA.



### NEW DESIGN ELECTRIC UNCAPPING KNIFE—

**\$12**

AC ONLY  
110-130V

6 ft. rubber covered asbestos cord,  
\$1.00 extra.

- THERMOSTAT CONTROL
- FASTER OPERATING
- EVEN TEMPERATURE
- LIGHT WEIGHT

**MACY ELECTRIC KNIFE COMPANY, Inc.**  
1239 S. LORENA ST. LOS ANGELES 23, CALIFORNIA

## Package Bees With Young Queens 1948 ITALIANS 1948

PRICES:

2-lb. package with queen	\$4.50
3-lb. package with queen	\$5.65
Extra Queens	\$1.35

Write for quantity discount.

\$1.00 per package books your order, balance 10 days before shipping, health certificate, live delivery. SATISFACTION.

**BOZONE APIARIES : Waynesboro, Miss.**

	5-lb.	10-lb.	25-lb.	50-lb.	100-lb.
Brewers Yeast and Soy Flour Expeller Mixed	\$ .75	\$1.50	\$3.25	\$6.00	\$11.00
Brewery Yeast	1.50	2.75	5.50	8.50	16.00
Soy Flour		1.50	2.75	4.75	8.50
Skim Milk Suitable for Use by Humans	1.00	1.75	3.75	7.50	14.00

Brewers Yeast, Soy Flour (Expeller) mixed with cane sugar and water ready feeding in cake form, \$2.00 (10-lb. can). Include postage if you wish it by parcel post. Allow 2 pounds for packaging. All prices collect, Bainbridge, N. Y.

**M. Y. S. COMPANY, BAINBRIDGE, N. Y.**

### Packages

### SUNKIST ITALIAN

### Queens

EXTRA PACKAGES! We have increased our capacity and can take additional orders in April to 10th of May. Plenty openings after 10th of May. Send us your inquiries for MARCH queens and packages.

Prices	1-25	25-up
2-lb. package with queen	\$4.25	\$4.00
3-lb. package with queen	5.25	5.00
Extra queens	1.25	1.15

**SUNKIST BEE COMPANY: Convent, La.**



# QUEENS - Package Bees For 1948

**ESTABLISHED 1883**

We know how to ship. We try to help you make money. With honey prices as they are, it's *best to buy the best*, at no increase in 1948 prices to you.

We like to have 50 per cent deposit and balance before shipping date. We believe this is fair to all—as we like to plan and ship the day you want shipment. **Price scale:**

	1 to 10	10 to 50	50 to 100	100 up
2-lb. package and queen	\$4.50	\$4.30	\$4.10	\$4.00
3-lb. package and queen	5.50	5.30	5.10	5.00
All untested queens \$1.25		Tested queens \$2.00		

**The Victor Apiaries**  
Uvalde, Texas

## New Quotation

	QUEENS	2-Lb.	3 Lb.	4 Lb.	5 Lb.
1 to 24	<b>\$1.40</b>	<b>\$4.25</b>	<b>\$5.65</b>	<b>\$6.95</b>	<b>\$8.30</b>
25 to 99	<b>1.30</b>	<b>4.00</b>	<b>5.30</b>	<b>6.65</b>	<b>7.90</b>
100 Up	<b>1.20</b>	<b>3.75</b>	<b>5.00</b>	<b>6.25</b>	<b>7.50</b>

For queenless packages deduct price of queen. For quality queens and prompt service try us. 15 years' experience. 25 per cent deposit required with order, balance before shipment is made.

**B. A. ANDERSON & CO.**  
OPP, ALABAMA

## Plant's 3-Banded Italians

Shipped on time, in new, light weight cages. State health certificate with each shipment. Live full weight arrival.

	1-24	25-99	100-up
2-lb. package with queen	\$4.50	\$4.25	\$4.00
3-lb. package with queen	5.75	5.50	5.25
4-lb. package with queen	7.00	6.75	6.50

Queens \$1.25 each, any quantity.  
20% holds shipping date. Balance two weeks before shipping.  
Packages are F. O. B. Queens postpaid.

**W. E. PLANT, Hattiesburg, Rt. 2, Mississippi**

### Italian Queens and Package Bees

We are now booking orders for 1948 delivery, only 20% with order, balance 10 days before shipping date. We guarantee live delivery and health certificate with each shipment. Prices as follows: 2-lb. pkg. with queen \$4.00; 3-lb. with queen \$5.00.

**N. GAUTHIER BEE CO.**  
HESSMER, LOUISIANA

### The Beekeepers' Magazine

3110 Piper Road, Lansing 15, Michigan

**\$2.00 PER YEAR**

Serving the Honey Producer of America  
Since 1938

We'd like to mail you a sample copy. Drop us a card today.

substances might be produced the ultimate solution would be to confine the poisons to the fields treated and to use materials that are least injurious to bees, livestock and the property rights of others.

The hazards of drifting poisons can be prevented largely by equipping airplanes and ground rigs with equipment capable of applying sprays in concentrated form with a droplet size large enough to settle rapidly. Then stickers and spreaders can be added so that the materials applied will fall and stay put where they will do the most good. The fact that many of the newer chemicals kill on contact, by fumigant action and as stomach poisons will aid the equipment manufacturers in devising means of applying minimum quantities of the poisons per acre in effecting economic control. Sprays can be applied under more adverse wind conditions than dusts so that commercial operators are finding that they can have a longer working day with sprays than when applying dusts. The insurance rates for applying nontoxic materials are also decidedly less than when arsenicals are applied, a factor of no mean proportions in the operation of pest control equipment.

The end of the hazards of chemical poisoning is not yet in sight but the future is infinitely more encouraging than the immediate past.

California.

## National Federation Resolutions

(Continued from page 137)

cultural Experiment Stations of the various states involved, and the Secretary of Agriculture of the U. S. Department of Agriculture establish an adequate research program to control and development methods of prevention of infection of *Nosema apis*, *Nosema* disease. It was suggested that a separate fund of at least \$40,000. per year be established for the above purpose.

(Continued in April Issue)

## Arnold Honey Farm

Newark, Arkansas

Positive delivery on your date April, May and June.

### Best Producing Italians

1-100, 2-lbs. \$4.50. 1-100, 3-lbs. \$5.50  
June 10th Booster Pkgs. 3-lbs. \$4.50.

# PREVIEWS

## OF COMING EVENTS

### Caterpillar Employees' Beekeepers Club

There will be a meeting of the Caterpillar Employees' Beekeepers Club on March 14, 1948 at 2:00 P. M. The meeting will be held in the Caterpillar Tractor Company showroom theatre, East Peoria, Illinois.

Speakers: Dr. V. G. Milum, Prof. of Entomology, University of Illinois. Mr. Carl Killion, Chief Bee Inspector, State of Illinois, Paris. Mr. G. H. Cale, Editor "American Bee Journal," Hamilton, Illinois.

Movie: The lectures will be supplemented by a movie just released by Dadant & Sons, Hamilton, Illinois.

To our knowledge this is the first Beekeepers Club of its kind. Caterpillar employees, numbering over 20,000, have numerous kinds of clubs for furthering their interests in their various hobbies and sports and now a Beekeepers Club to add to an already long and growing list of activities.

The originator of this novel club was Lloyd Ravenscraft, a tool designer, who was subsequently elected president.

### Columbia, S. C., Meeting, March 17

The Palmetto State Beekeepers Association will hold their spring meeting March 17, 1948. The meeting will be at Babcock's Honey House which is located near the Veterans' Hospital on U. S. Highway 76.

### Bronx County Meeting, March 14

The Bronx County Beekeepers Association will hold its regular monthly meeting at the home of Mr. Herman Wilde, 30 West 190th Street, Bronx, N. Y., on Sunday, March 14, 1948 at 2:00 P. M. Following the meeting a St. Patrick's day dinner will be served with square dancing to follow under the leadership of a good caller, Mr. E. V. Lynch. Cost of dinner will be \$1.50 per plate.

Sam Roberts, Sec.

### North Carolina, Winston-Salem, March 15-16

The North Carolina State Association has accepted an invitation from the Forsythe County Bee Club to hold the annual meeting and election of officers in Winston-Salem, for two days and one evening, Monday, the

15th, and Tuesday the 16th of March. The meeting will be in cooperation with the State Department of Agriculture and the State College Extension Service. A good array of talent is being lined up for the program. Detailed information as to meeting place and time may be secured from the county agricultural agent's office in the Court House.

Frank B. Meacham, Sec.  
N. C. State Museum.

### Tazewell County (Illinois) Pekin, March 13

The Tazewell County Association will meet Saturday, March 13, in the Farm Bureau Building, Pekin, Illinois, to celebrate the association's fifteenth anniversary. There will be a pot-luck supper and plenty of entertainment. Everybody invited.

J. Floyd Strobe, Sec. Treas.

### North Star Association, March 16, St. Paul (Minnesota)

Our meeting will take place March 16, 7:30 P. M., at the St. Paul, Minnesota, Public Library, 90 West 4th Street. Clarence C. Langley will talk along the lines of his article in the February Journal. There will also be other speakers.

Robert W. Anderberg, Pres.

### Western Missouri, March 7, Kansas City

The Western Missouri Association will hold its next meeting March 7, 2:30 P. M. in the City Hall, 12th and Oak Streets, Kansas City. Topics "Spring Management" and "Swarm Control."

Frank E. McLaughlin, Pres.

### Westchester County (N. Y.) New Rochelle, March 21

The Westchester County Association will hold the regular monthly meeting, Sunday, March 21, 2:30 P. M., at the Odd Fellows Hall, 20 Lockwood Ave., New Rochelle, N. Y. Refreshments will be served after the meeting. Visitors welcome. (Newest member, son of President Alfred Roth, born January 9).

B. F. Miller, Publicity.

### Ohio Farm and Home Week, Columbus, Ohio, March 23-24

During Farm and Home Week, at the University of Ohio, Columbus, there will be a program for beekeepers in Room 100, in the Botany and Zoology Building, March 23, 8:00 A. M. to 3:00 P. M.; annual banquet in evening. March 24, 8:00 A. M. to 3:00 P. M. Speakers and subjects: Beekeeping Equipment, Chas. A. Reese; Inspection and Disease, S. E. Bailey; Adult Disease, Chas. A. Reese; Bee Breeding, Dr. Wm. C. Roberts; Insecticide Control, S. E. McGregor; Weed Control, Dr. C. J. Willard; Ohio Beekeeping, W. A. Coulter; Ramblings, M. J. Deyell; Queen Rearing, Dr. Wm. C. Roberts; Sanitation In Beekeeping, Roscoe W. Franks; Discussion—a program for honeybee stock improvement. Election of officers.

### Virginia Association, Lynchburg, March 24

There will be a regular meeting of the Virginia State Association, in Lynchburg, in the Directors' Room, Chamber of Commerce, Allied Arts Building, on Wednesday, March 24.

Henry W. Weatherford, Sec.

### Berks County (Pa.) Reading, Mar. 31

The Berks County Association will hold its spring meeting, March 31st, at the Y. M. C. A., Reading, Pennsylvania, at Reed and Washington Streets, 8 P. M. Mr. Clark, from Pennsylvania State College, will talk on spring management. There will be other interesting discussions and the election of officers.

Henry F. Phillips, Sec. Treas.

# Package Bees with Queens

## ITALIANS

### PRICES—WITH QUANTITY DISCOUNTS

These prices are to prevail

Small orders cash, large orders 2% deposit. Balance in 10 days before shipping date.

	1 to 9	10 to 99	100 and above
2-lb. package with queen (each)-----	\$4.25	\$4.10	\$4.00
3-lb. package with queen (each)-----	5.35	5.20	5.00
Queens (each) -----	1.30		

Many desirable shipping dates still open. Try our bees and queens.  
They will do the job for you.

BE WISE AND ORDER NOW

# Sunshine Apiaries

Box 471

Woodville, Miss.

# PACKAGE Bees For 1948

Now booking orders for THE OLD RELIABLE

## Puett's Packages and Queens

No increase in price unless cost of sugar takes a material advance

All orders for more than two packages SHOULD BE FOR MULTIPLES OF THREE, to make even crates.  
All orders should be accompanied by payment of \$1.00 PER PACKAGE, to confirm and hold shipping date, balance payable before shipping.

PRICES—Quantity Scale:	1 to 9	12 to 48	51 to 99	102 & Above
2-lb. Package with Queen-----	ea. \$4.50	ea. \$4.25	ea. \$4.15	ea. \$4.00
3-lb. Package with Queen-----	ea. 5.65	ea. 5.40	ea. 5.30	ea. 5.15
4-lb. Package with Queen-----	ea. 6.80	ea. 6.55	ea. 6.45	ea. 6.30

Extra Queen, Untested, \$1.25, any quantity—Tested, \$2.00, any quantity.

For queenless packages deduct \$1.25. Loose-Queen type (late shipment only) add \$1.00.

Any deposit refunded if order is cancelled ten days before shipment.

ORDER TODAY—DON'T WAIT.

## THE PUETT COMPANY : Hahira, Georgia

1948

## GOOCH'S ITALIAN QUEENS THAT PRODUCE

1948

5,000 packages and 15,000 queens will be ready for shipment to YOU in the early spring. Bright Yellow and Three-Banded Italians, EACH QUEEN THE DAUGHTER OF A QUEEN THAT PRODUCED 300 LBS. OR MORE OF SURPLUS HONEY IN ONE SEASON, AND MATED TO DRONES OF EQUAL QUALITY.

PRICES	1 to 10	11 to 50	51 to 100
Queens, each -----	\$1.40	\$1.30	\$1.15
2-lb. package with queen-----	4.50	4.20	4.10
3-lb. package with queen-----	5.60	5.30	5.20

Full weight packages, young laying queens and live delivery guaranteed. PROFITABLE BEEKEEPING BEGINS WITH GOOCH'S QUEENS.

## JESSE E. GOOCH & SONS : Rt. 3, Pine Bluff, Arkansas



## Bee Rock, California

(Continued from page 136)

make this hole large enough to admit the body of a person.

The third day finished the job. A great mass of dead bees covered the floor. Rows of honeycombs hung tier upon tier from the ceiling, but in the center of the cavern floor, in perfect cone formation was what appeared to be a pile of broken transparent window glass. This mound was twenty-eight inches high and thirty-four inches wide. The cavern was not large. Possibly seven feet deep, four feet high at its highest part and three and a half feet wide. The problem was how did that mound of broken glass get there.

Dad Sagasa put some of it in his pocket before he climbed hand over hand to the safety of the juniper tree. Both Joe and his mother were interested in the find. On the way home Joe put some of the crystals in his mouth. For a while he was perfectly silent. Then he asked, "Dad, may I have some more of that rock candy." Investigation showed these crystals to be pure water white honey. They dissolved readily in warm water.

During the days that followed a sled road was built over the mile and a half to the Sagasa home, and the mule team dragged a sled to the rock. This pioneer family did not have enough rope to reach from the top to the bottom of the rock so they used the leather driving lines from their mule team. Joe filled his bucket from the cave. His father would lower it to the bottom while standing on the top braced by the juniper tree; then Mother Sagasa would fill a washtub on the sled. They secured two wash-tubs full of crystals and three wash-tubs of comb honey. It was a wonderful find. It was a perfect adventure.

The question now comes, did the bees build this crystal cone or was it the result of a natural law? If it was a natural law, then we conclude that stalagmites may be formed from air action when the air is impregnated with any substance of a cohesive rather than an adhesive nature. This substance will form where it first begins to collect and nowhere else. Honey is heavy, therefore, it would collect as a stalagmite on the floor and not as a stalactite hanging from the ceiling. Adhesive elements on the contrary will adhere to the walls and give the appearance of water action.

—California.

WE CAN STILL ACCEPT ORDERS, LARGE OR SMALL, FOR LATE  
MARCH THROUGH MAY FOR OUR

### Line-bred Italians or Caucasians

BRED TO ITALIAN DRONES

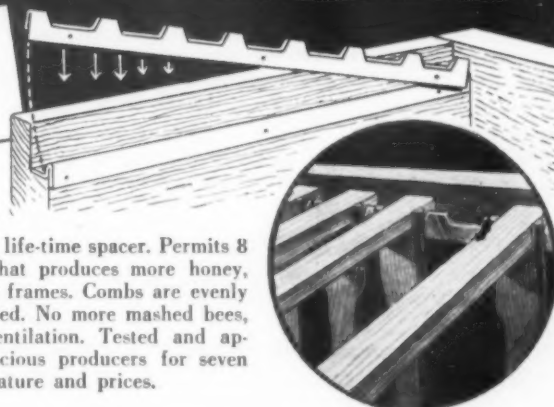
	1-9	10-24	25-99	100 up
2-lb. with queen	\$4.40	\$4.25	\$4.15	\$4.00
3-lb. with queen	5.65	5.40	5.30	5.15
4-lb. with queen	6.90	6.65	6.40	6.30
Extra queens	1.35	1.30	1.25	1.20

Member of American Bee Breeders Association

**LOUIS L. COUCH, The Village Beekeeper : PINEVILLE, LA**

### You save ALL WAYS with the STOLLER *Slip-on* FRAMESPACER

Stoller Spacers fit over, or replace, any standard frame rest or tin rabbet. 16 styles and sizes.



At last! An all-metal, life-time spacer. Permits 8 or 9 comb spacing that produces more honey, more wax with fewer frames. Combs are evenly capped. Easily installed. No more mashed bees, poor spacing and ventilation. Tested and approved by profit-conscious producers for seven years. Write for literature and prices.

**STOLLER** *Honey Farms* LATTY, OHIO

### Leather Colored Italian Queens and Package Bees

Two pound package with queen	\$4.50 each
Three pound package with queen	5.60 each
Queens	1.50 each

Postage paid on queens. Express charges collect on package bees. 20% deposit with order and balance before shipment.

**C. G. WENNER : Glenn, California**

### 3-Banded Italian Package Bees & Queens

Live delivery, full weight, prompt shipment and a health certificate guaranteed

Prices as listed below:

Lots of	Queens	2-lb.	3-lb.	4-lb.	5-lb.
1-24	\$1.40	\$4.50	\$5.85	\$7.20	\$8.55
25-99	1.30	4.25	5.55	6.85	8.15
100 up	1.20	4.00	5.25	6.50	7.75

Booked up until May 5th for package bees. Open dates for queen orders after April 15th.

**FARRIS HOMAN : Shannon, Mississippi**



The heart of comb honey is foundation. The biting quality of the honey, that delicate center taste is foundation. It must literally become a part of the honey, so tender, a touch of the tongue will crumble it; yet be so strong that bees work it out quickly and easily. Dadant's Surplus Foundation, fragrant and pure, thin and sweet, blends so naturally with your finest comb honey, that your market grades are better and your sales are quicker.

**Dadant & Sons**  
HAMILTON, ILLINOIS

## Package Bees and Queens

CAUCASIAN AND ITALIAN CROSS BRED  
FOR HONEY PRODUCTION

All packages headed by young queens bred from carefully selected stock tested in our northern honey producing yards and all queens are reared in standard three frame nuclei, assuring you of a queen that will produce a crop.

—SATISFACTION GUARANTEED—

5,000, 3-LB. PACKAGES AT FOLLOWING PRICES

3-lb. pkg. with queen (each)			
1-9	10-49	50-99	100-up
\$5.65	\$5.40	\$5.30	\$5.15

20% to book order, balance 10 days prior shipment.

**Innanen Apiaries**

Member Sioux Honey Association

VICKSBURG, MISS.  
Shipping Point and  
Southern Address

SIoux RAPIDS, IOWA  
Northern Branch

## JENSEN'S

"Magnolia State" Strain

### Italian Package Bees & Queens

33 years of experimentation and stock improvement practice behind this strain, is the answer to its world-wide popularity.

We are booked up to May 10th to capacity.

Prices	Queens	2-lb pkgs.	3-lb. pkgs.
		with queens	with queens
1-24	\$1.40	\$4.50	\$5.85
25-99	1.30	4.25	5.55
100-up	1.20	4.00	5.25

#### DISEASE RESISTANT QUEENS

This is our third year commercial production of queens from Tested Resistant stock which we believe to be the finest available in the U. S. today. In the development of breeding queens and drone mothers in the north, Disease Resistance and honey production have been primary objectives; other characteristics such as gentleness, general behavior and color, have also been greatly improved. We recommend them to amateur and professional alike in territory where A. F. B. is prevalent.

The price is 25c per queen higher than listed above, and on these we are also booked for our out-put until May 10th.

**JENSEN'S APIARIES**  
MACON, MISS.

The business QUALITY built.



## WITHSTANDS HOT WEATHER

NON-SAGGING NONSTRETCHING

Stretched cells reduce the brood area of combs

Drones eat up your profits

Stop this loss. For efficient, profitable combs use THREE-PLY

Order now. No advance in prices

**THE A. I. ROOT CO. OF IOWA**  
COUNCIL BLUFFS, IOWA

# ... Crop and Market

By M. G. Dadant

According to Government figures compiled in December some 60 million pounds of a total of 228 million remained on hand at that time compared to ten million at the same date in 1947. Reporters generally in the New England States and down the east Atlantic Coast to Florida and east to Texas report 10 to 20 per cent of the crop still on hand as of February 10th with the hope that it will all move before the new crop is ready. Pennsylvania, Ohio, and Indiana do not seem perturbed over the balance of the white honey left on hand.

The North Central States report heaviest holdings, with from 40 to 80 per cent still on hand with big producers. Many smaller ones who have catered to the home trade are not so bad off. The Intermountain seems somewhat better off with from 20 to 30 per cent still on hand. This can well apply also to the West Coast where much early honey was moved previous to any heavy sag in demand.

Likely most all honey will move in the eastern sections down the Atlantic Coast and across the South. Very unlikely so in the Central West, though if the twelve million pounds of amber the government offers to buy with a minimum of 10 cents delivered to the beekeeper is available at the price and is packed and moved for export, it will make a decided easing in the situation.

Nor is it likely that western honey will all move before the new crop. There seem to be two or three deterrents to heavy movement of honey. Bakers and other commercial interests seem not to be interested unless honey comes down near the price of sugar. Many stores are still trying to dispose of their stocks on hand without taking losses on some of their high price packages. As a result the public is not interested in buying.

Packers, including co-operatives, are trying to move what is on hand before even making offers or ordering shipments of further stocks, so carlot quotations are not much in evidence. We have learned of as low offers as 10 cents for amber and 14 cents for white. In fact some of the packers seem not interested at that figure unless they know where the honey can be turned.

On the other hand plenty of small producers are pleased with the movement at figures that give them from \$1.35 to \$1.50 for 5-lb. pails retail, and other sizes in proportion.

Canadian stocks are moving off fairly well, though at prices which seem excessive to us here in the U. S. A. One beekeeper suggests 27 cents. Some effort may have to

be made on the part of the larger packers and co-operatives to clean up supplies before the new crop is available, but the stringency on sugar still means that honey is in good demand in Canada.

The winter brought steady, cold weather. Moisture has been satisfactory and in the South rivers have been bank full, which should put honey plants in good condition. Intermountain regions may not have had snow enough to insure proper irrigation water, but there is still time for further moisture.

Two weeks ago, California looked like it was in for an under-par season as it had been extremely dry in winter. Some rains fell in mid-February, but much more was needed to approach even the quite ordinary season of 1947. Copious rains have fallen in Washington and Oregon.

Package shippers are encouraged at the slow development of their season as contrasted with 1947 with its early warmth and following inclemency. They hope for warm late February and March weather to assure good queen rearing conditions and plenty of bees for packages.

## Will You Be Listening?

Med Maxwell announces an interview with Frank Pellett from the American Bee Journal Test Garden on his "Let's Go Visiting" program on Tuesday, March 23rd. It will be carried by WLS from Chicago at 6:30 in the morning and by WHO from Des Moines at 12:15 during the noon hour, Central Standard Time.

**HONEY WANTED**

Cars and less than cars  
Top Prices

C. W. AEPPLER CO., Oconomowoc, Wisconsin

## Government Honey Purchase

Write us if you have any honey that is eligible for acceptance under the government purchase program. Our plants are equipped to prepare your honey for this program and our facilities beyond the capacity needed for our members will be made available to all producers in areas which we can economically serve.

When writing specify quality and type of honey. Address your letters to the

**Sioux Honey Association, Sioux City, Iowa**



## PACKAGE BEES : QUEENS : 1948

Now booking orders for this high producing strain of LEATHER COLORED ITALIANS. Queens are reared direct from the egg (not grafted or disturbed), produces more vigorous queens, less supersedure. Still have some choice shipping dates open during April. We start shipping March 15th. 20% books you.

	1-9	10-49	50 Up
Queens	\$1.40	\$1.35	\$1.30
2-lb. Bees	4.50	4.35	For queenless package
3-lb. Bees	5.75	5.60	deduct price of queen.

**NOVINGER APIARIES, Oxford, Florida**

## DOVETAILING MACHINE

Now a size for every beekeeper's shop. A valuable machine for making your own hive bodies and supers and for repairing your old ones.

No reason to ever be short of hives and supers with one of these machines in your own shop. Does a perfect job of dovetailing.

Requires only a small motor to operate. Make those slack winter months pay dividends by making your own equipment. Easy to operate and priced within reach of all beekeepers. Write for details.

**CARL E. JOHNSON CO.**

1557 Gregory Ave., Lincoln Park 25, Michigan

## ITALIAN -- CAUCASIAN

### Queens - Package Bees - Nuclei Full Colonies

TESTED AND APPROVED by many beekeepers from many states and foreign lands (testimonials on request). We have some open shipping dates for May. We ESPECIALLY INVITE YOUR INVESTIGATION OF OUR SEVERAL THOUSAND one-story 10 frame colonies that we offer for early May delivery.

Untested queens	\$1.40 each
2-lb. packages with queens	5.00 each
3-lb. packages with queens	6.25 each
2-lb.—2 frame nuclei	6.75 each
Full colonies—10 frame	12.50 each

Get our quantity discounts.

**The Coffey Apiaries**

Whitsett, Texas

### Queens

### PACKAGE BEES

### Queens

ITALIAN STRAIN LINE BRED FOR HONEY PRODUCTION. 5,000 packages; 12,000 queens for April and May shipment.

	1 to 9	10 to 49	50 to 99	100 up
2-lb. pkgs. with young queen	\$4.50	\$4.25	\$4.15	\$4.00
3-lb. pkg. with young queen	5.65	5.40	5.30	5.15
	1 to 24	25 to 49	50 to 99	100 up
Queens, daughters of tested breeders	\$1.35	\$1.30	\$1.25	\$1.20

We welcome large orders. Live delivery guaranteed.

**SOUTHLAND APIARIES : Montgomery & Son : Ball, La.**

## ITALIAN BEES

Package Bees with Queen. 2-lb. pkgs. with queen \$4.00; 3-lb. pkg. with queen \$5.00; 4-lb. pkg. with queen \$6.00. Satisfaction guaranteed. 20% down to book the order.

### BUNKIE BEE FARM

R.F.D. 2, Box 85, Bunkie, Louisiana

## The Good Earth Magazine

Newly appointed magazine of the San Bernardino County Honey Producers Association. Read about California beekeepers and their allied interest, the agriculturists of California. Articles by real dirt farmers for farmers. Send \$1.00 for one year's subscription.

THE GOOD EARTH MAGAZINE  
P. O. Box 1066 RIALTO, CALIFORNIA

## EVANS BROS.

### Quality

### Italian Package Bees

Have a few open shipping dates for early April and May

### EVANS BROS.

Durham, Calif.

## Booked to Capacity on Packages

THANKS TO EVERY ONE

Can accept orders for a few hundred queens for May 15th to June 25th.

1 to 9	\$1.25 ea.
10 to 24	1.10 ea.
25 or more	1.00 ea.

### Crowville Apiaries

RT. 1 WINNSBORO, LA.

## Packages with Queens

	2-lb.	3-lb.
1-24	\$4.50	\$5.85
25-99	4.25	5.55
100-up	4.00	5.25

### Bond & Son Apiaries

Route 2, Box 100-C, Vicksburg, Miss.

## FOR SALE

BRIGHT YELLOW AND THREE  
BAND QUEENS

### GRAYDON BROS.

RT. 2 GREENVILLE, ALA.

## QUEENS

LEATHER COLORED ITALIAN—For delivery after May 10th only. \$1.25 each, any number.

**Gold Flat Apiaries**  
NEVADA CITY, CALIFORNIA

# .....Postscript

Frank C. Pellett

There has been some disagreement among my correspondents as to the quality of honey from purple loosestrife. In my book, *American Honey Plants*, I have described the honey as dark and of strong flavor. Some insist that I have been mistaken in this description. Mr. Andre Prost, who makes a specialty of honey from special sources, sends me a jar of loosestrife honey gathered in New York. This sample agrees with my previous description. There is very good evidence, however, that the quality of honey from any particular localities. It may well be true that loosestrife honey may be much lighter in color and milder in flavor in some places.

Mr. Andre Prost also sends me a jar of honey gathered from marigold at Vineland, New Jersey. This is also honey with a very pronounced flavor. The firm of Prost & Colahan is rendering a distinct service in making available the honey from a particular source as desired by the customer. Just now they are seeking a supply of honey from lespedeza bicolor.

The marigold of the Delaware River Valley is closely related to the Spanish needles and has much the same appearance. It blooms a little later in the summer and the seed lacks the stickers that make "boot-jacks" of the seeds of Spanish needle. In our test garden the marigolds bloom very freely but rarely attract the bees in our dry summer climate. Beekeepers living along the Delaware report that the honey harvest rarely fails there.

From Corliss Williams, of Danville, Iowa, comes a head of Ladino clover with the suggestion that I count the number of seeds which it contained. To my surprise 416 seeds were found in the single head. The seeds are very small and a pound is sufficient for a half acre of land when properly distributed on a well-prepared seedbed. Mr. Williams is finding the growing of clover seed in combination with honey production to be

a very satisfactory undertaking. I wonder whether any reader has found a larger number of seeds in one head.

Many a man suffering from a nervous strain has been able to relax and find relief with the bees. A long letter telling of such a case has recently come to me. After a long period of overwork and anxiety growing out of help shortage and wartime restrictions came the loss of an only son in a bombing raid over Germany. The result was near collapse. The purchase of a small apiary brought a new interest in life. Long hours in the open air with the bees brought forgetfulness and helped to bring mental and spiritual recovery. It is doubtful whether any physician could have helped so much. A quiet life with bees is soothing to tired nerves and quieting to emotional strains. Many a successful beekeeper has found a return to health along with a comfortable measure of prosperity in the apiary.

The multiflora rose is being planted by thousands to provide a good hedge fence and game cover. It grows about six feet high and will turn all farm animals thus making a fence which requires no repairs. Game birds find shelter and food and the bees find an abundance of pollen. There is every indication that it will be much more generally used in the future. It would seem to be worth a trial to see whether this rose could be planted with a shrubby lespedeza by alternating the plants so as to provide good bee pasture along with other advantages.

When called upon recently to identify some plants blooming in a nearby pasture, I found the biggest surprise in many months. Within a few miles of Hamilton a sheep pasture was found to be well covered with bitterweed in full flower. I have long been familiar with bitterweed which yields a nectar bitter as quinine but never before did I know of its presence so far north. The plant is common from southern Missouri to

eastern Tennessee and southward. To find it so well established so near home raises the question as to whether in time it may not be widely spread throughout the north as well. The presence of this plant certainly complicates matters for the beemen since the mixture of even a small amount of bitterweed honey will spoil a large quantity of better grade quality.

It was from F. N. Howes, of Kew Botanical Garden in England, that I learned about *Perezia*, a South American plant with China blue flowers and as many as 100 on a single stalk. Its great attraction for the bees appealed to me and I was glad to get seed through the kindness of Mr. Howes. It was planted in the test garden on April 25 and germinated readily. However, the plant has never seemed happy with us. The spring was so cold and wet that conditions were unfavorable. Later it turned hot and dry and the entire summer passed without any indication of flowers. The plant is said to be an annual so we have little confidence that it will survive the winter and live to flower at a later time. Thus we plant seeds of hundreds of plants that never give us any return for the attention we give them.

Seed of the Himalayan Balsam (*Impatiens roylei*) also received from England and planted at the same time, proved even more disappointing. Not a single seed came up so it was replanted a month later with no better success. Many seeds are temperamental and require special conditions to assure success. Some are slow to germinate, some must be subjected to a period of cold and some must be planted very soon after maturity. Not knowing the special requirements of strangers to our garden we have many failures which might not be necessary if we knew more about them.

From Montreal comes the statement that claims for anise-hyssop are far too modest. "The bees crowd each other on the patch of plants. The plants came from Canada to Iowa and back here. Everyone who has tasted the honey says it is the best honey they have tasted." The writer comments on the fine flavor which is different from that previously produced in the neighborhood.

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## BEES AND QUEENS

### THREE BANDED ITALIAN bees and queens.

Best of quality. 2-lb. with queen, \$4.50; 3-lb. with queen, \$5.50. Select untested queens, 1 to 25, \$1.25 each; 25 to 50, \$1.20. 50 up, \$1.15; for tested, double the price. Health certificate with every order. Black River Apiaries, Currie, North Carolina.

GREEN'S profit-producing queens will please you as they have pleased hundreds of others. Famous the country over. Where could you do better? Price, \$1.00 each. D. P. Green, Rt. 2, DeLand, Florida.

ITALIAN BEES AND QUEENS. Packages with queens—2-lb. 1-5, \$4.50; 25-99, \$4.25; 100 up, \$4.00. 3-lb. \$5.85, \$5.55, \$5.25 respectively. Extra queens, \$1.40, \$1.30 and \$1.20 respectively. Health certificate, live delivery guaranteed. J. Otto Hall, Box 415, Prichard, Alabama.

IMPROVED ITALIAN BEES—3 pound pkg. with queen \$5.00. Henry Loehr, Caldwell, Texas.

CAUCASIAN AND CARNIOLAN BEES. 2-lb. pkg. \$5.00; 3-lb. pkg. \$6.00. Untested queens, one, \$1.35; fifty, \$62.50; one hundred, \$120.00. Book your order early. Tilley Brothers, Greenville, Alabama.

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JOE'S ITALIAN BEES AND QUEENS for May and June delivery. 3-lbs. with queen \$4.90; 4-lbs. with queen \$5.75. No deposit necessary to book order. Live delivery and health certificate guaranteed. Joe Roy Apiaries, Hesser, Louisiana.

ITALIAN QUEENS. Booking orders now. Raised for honey production. \$1.00 each. Kirkwood Apiaries, Bristow, Oklahoma.

ITALIAN QUEENS \$1.05 each. Air Mail: after June 1st 90c each. Every queen guaranteed. Walter D. Leverette, P. O. Box 364, Fort Pierce, Florida.

GOLDEN ITALIAN Package Bees and Queens—2-lb. and queen, \$4.50; 3-lb. and queen, \$5.50; untested queens \$1.25 each. All bees shipped in new cages and a health certificate with every order. Carolina Bee Farm, Graham, N. C.

PACKAGE BEES AND QUEENS—2 pounds with queen \$4.50; 3 pounds with queen \$5.85. Queens are all 3-banded Italian and highest quality. Extra queens \$1.40 each. Wm. F. Daughtry, Hartford, Alabama.

CAUCASIAN QUEENS. Are you looking for good queens? Try our Caucasian. They have proved good since 1932. Twenty-two years' experience rearing queens. Write for information. Mark L. St. John, Ripon, Calif.

A GOOD RULE to go by—Buy your Italian bees and queens from ALABAMA APIARIES, Uriah, Alabama.

FOR SALE—Three pounds certified Italian bees with young queen, \$4.50, shipped after May fifteenth. Gallberry extracted honey, six five-pound jars, \$9.00. Pure Georgia sugar cane syrup, six half gallon jars, \$6.00. Certified sweet potato and tomato plants. Two hundred ten-frame colonies certified for package shipping standard painted equipment, young fall queens on early spring locations. VALDOSTA HONEY CO., Valdosta, Georgia.

THREE BANDED ITALIAN bees and queens for April and May. All packages with queens—2-lb., 1-25, \$4.50; 25-99, \$4.25; 100 up, \$4.00. 3-lb. \$5.85, \$5.55, \$5.25 respectively. Extra queens, \$1.50, \$1.30 and

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\$1.20 respectively. Inspection certificate furnished. Write for further information. Cottage Hill Apiaries, Rt. 2, Mobile, Alabama.

1500 PACKAGES FOR APRIL ONLY with Italian queens at prevailing California prices. Cash for order 10 days before shipping. D. N. Brown, 1661 Orchard Ave., Pomona, California.

THREE BANDED ITALIAN bees and queens for 1948. Queens \$1.00 each. 2-lb. pkgs. with queen \$3.50 and 3-lb. pkgs. with queen \$4.50. George O'Neill and Sons, Haines City, Florida.

BREWER'S LINE-BRED CAUCASIAN QUEENS—Now booking orders for April delivery. 30c deposit on each queen at time of booking. No package bees. Brewer Brothers Apiaries, 3616 Caucasian Circle, Tampa 6, Florida.

Bill Atchley's famous queens and nuclei, they really make you money. Untested February, March, and April, \$1.50 each; May, June, July, \$1.25 each. Nuclei all sizes, April, May, and June delivery, at special low prices quoted upon request. A real bargain in single story colonies for May and June delivery. Wm. Atchley, 500 E. Ninth St., Upland, California.

HIGHEST QUALITY dark Italian queens. Order now for spring delivery. Price \$1.25 each. Special rate over 100. 20% deposit holds shipping date. Atherton Apiaries, Kenedy, Texas.

LANGE'S FINE ITALIAN queens give the best in satisfaction. Write for prices and open dates. Lange Apiaries, Rt. 2, Box 23W, Mission, Texas.

ITALIAN package bees and queens for March and April delivery. Three pound package of bees with queen \$5.75. Queens \$1.40 each. John M. Brose, P. O. Box 36, Felton, Calif. Phone Santa Cruz 32-W-2.

PACKAGE BEES, QUEENS, Italians. Circular free. Crenshaw County Apiaries, Rutledge, Alabama.

## HONEY AND BEESWAX WANTED

WANTED—Extracted honey in new 60-lb. cans, light, also light and dark amber. Send sample and price wanted. Fred Wyatt, Oak Grove, Missouri.

WANTED—Extracted and comb honey, all grades. Send price and sample to Weldon Bee Farms, Warrensburg, Missouri.

DESIRE TO CONTRACT for substantial quantity of only very top quality strained white clover honey. When writing give approximate yearly production and amount of 1947 crop still available. Box 29, care American Bee Journal.

BEESWAX AND HONEY—WE PAY top prices for beeswax. Send for shipping tags. Also send us sample of honey and your price. Want carloads or less. GLASSWARE—We carry carloads of all sizes in stock at wholesale prices. Let us quote on your needs. SUPPLIES—Wooden shipping cases for two 60's with strap iron. New and used. Assembled or knockdown. Root's three ply and Dadant's Crimp-wired foundation, corrugated cartons for 60's, sulfathiazole. NOTICE—We are equipped to liquefy, process, and pack your honey for foreign shipment. Alexander Company, 818 Reynolds Road, Toledo, Ohio.

WANTED—Extracted honey, white or light amber, in 60's. State price in first letter. Ed. Heldt, 1004 W. Washington St., Bloomington, Illinois.

WANTED—Extracted clover honey in 60's B. I. Evans, Windom, Minnesota.

HONEY WANTED—All grades and varieties. Highest cash prices paid. Mail samples. State quantity. HAMILTON & COMPANY, 1360 Produce Street, Los Angeles, California.

HIGHEST CASH PRICES paid for all grades extracted honey. Prairie View Honey Co., 12303—12th St., Detroit 6, Mich.

## HONEY FOR SALE

COMB, sourwood. 10-lb. pails \$5.00. Alvin Smith, Zenith, West Virginia.

BUCKWHEAT HONEY in 2-lb. and 5-lb. jars. Processed and labeled at 20 cents per pound in hundred case lots. Ralph Woods, Battle Lake Minnesota.

10,000 lbs. basswood-clover honey in 5-lb. pails and jars, heated to 155°, 19c lb. Also 10-lb. pails, 18c lb. F. O. B. Flygare Apiaries, Annandale, Minnesota.

FANCY WHITE TUPELO—15,000 lbs. in barrels at 25c lb. R. R. Davis, Wewahatchka, Florida.

CLOSE OUT PRICE Northern N. Y. white clover honey, truckload lots 18c. Cased and F.O.B., 19c on 10 cases or more. A. J. Wilson, Hammond, New York.

WHITE HONEY in new sixties. Can or carload. Satisfaction guaranteed. Sample one dime. Prices on request. Harry C. Kirk, Armstrong, Iowa.

NEW CROP of orange honey in large quantities. Write for price. E. R. Raley, Box 1610, Daytona Beach, Florida.

100—60's amber clover honey, 15c lb. 125—60's dark, 14c lb., F.O.B. Roy Baxley, Christopher, Illinois.

12,000 lbs. best clover, good 60's; 18,000 lbs. good light (¾ clover); 1200 lbs. dark, amber, new 60's. Make offer on all or part. Louis Farrington, Henderson, Iowa.

FIVE HUNDRED new sixties light clover honey at 18½c., Dunlap, Iowa. Chas. Miles.

FOR SALE—Twenty 60-lb. cans good medium color clover honey at \$15 per can. F.O.B. Ernest Smith's Honey Farm, Rt. 2, Box 315c, Aurora, Illinois.

EXCELLENT QUALITY clover honey in new 60's, 10's or 5's, or car lot 60's. Write or buzz, Ohmert's Bee Farms, Dubuque, Iowa.

FOR SALE—Dark honey in new 60-lb. cans at 17c per lb. Edw. Hogan, 210 Gibson St., Canandaigua, N. Y.

61 cans 1947 amber honey. New sixties. Write for prices. Sample 15c. Meyer Toom, Rt. 4, Knoxville, Iowa.

FOR SALE—Honey, desirable grade, packed in new 60-lb. cans. Carloads lots or less. On U. S. Hiway 30. Russell D. Smalley, Beaver, Iowa.

SWEET CLOVER HONEY in sixty pound cans, carload lots. Also few hundred cans of Buckwheat honey. Shipping point Bruce, South Dakota. Address J. D. Overbey, care Box 471, Woodville, Mississippi.



**FOR SALE**—Amber extracted, new sixties, mild flavor. Write for prices. N. B. Querin, Bellevue, Ohio.

### FOR SALE

800 TEN-FRAME colonies with locations. Four supers each. Twelve dollars each. Also complete extracting equipment. This is a first-class outfit. Absolutely no disease. J. F. Shipton, Lander, Wyoming.

250 HEAVY COLONIES, clean. 500 deep supers, excellent combs. H. B. Allen, Cozad, Nebraska.

SURPLUS 400 colonies bees in new standard hives. Priced right. State inspected. Box 383, Berryville, Virginia.

BEES located in northwestern Minnesota to sell or lease on share basis. Need help March first. State wages expected first letter. Hopkins Honey Farms, Maringouin, La.

**FOR SALE**—105 colonies of bees in New Jumbo hives, shallow super included, \$15. Inspected. William Kuhnen, Rt. 3, Box 62, Orland, California.

FOUR COLONIES of pure Caucasian bees for sale. Lots of extra equipment. Certificate of inspection furnished. Eddie Sondelski, Route 2, Dancy, Wisconsin.

MODERN HOME, new honey house and extractor, tank, 2 acres of land, excellent bee location, \$2500.00. Located 9 mile northwest of Savannah, Mo., on 275 highway. For further information write Mrs. Ruth Lundin, Rt. 2, Box 275, Pine Bluff, Arkansas.

**FOR SALE**—Fifty colonies bees, one one-half story, new equipment, metal covers. No disease. Price twelve dollars each. D. A. McKinney, Oakland City, Ind.

**FOR SALE**—Reducing number of colonies, all ten-frame size equipment, good condition, 225 complete hives with ten drawn combs, bottom boards, migratory type covers, feeder jars, cleats, \$4.00 each. 500 standard supers with frames, no wax, \$1.00 each. 200 excluders 60 cents. 25 boxes Dadant crimp-wired foundation, 25 pounds in carton, \$20.00 per carton. 50 good telescope covers 75 cents; 50 poor telescope covers 15 cents. 100 inner covers 25 cents. 2-stem steam knife \$5.00. Safety valve for knife \$2.00. Electric knife \$6.00. Neises 5 foot gravity honey clarifier \$30.00. Bradshaw 3-basket uncapper with two presses \$100.00. 46 cartons 10-pound pails \$5.00 per carton. 4 100-lb. bags of soy flour \$6.00 per bag. 50-lbs. of yeast \$6.50. Robert E. Denny, Roseau, Minnesota.

SUPERIOR 16-frame reversible extractor with electric motor, like new. 200 supers. 100 beehives, 100 excluders. Geo. C. Rubis, 19 E. 8th St., Spencer, Iowa.

25% OFF! 500 Lewis No. 35 long top bar brood frames, 100 \$8.10. 50 lbs. Dadant 8½x16¼ crimp-wired foundation, 25-lbs \$19.88. 500 4¼x17 beeway split sections, 500 \$9.85. Charles Wilson, Grey Eagle, Minn.

25 stands bees. Disease free. 50 medium deep supers with drawn comb. F. H. Mulberry, Mt. Auburn, Illinois.

PACKAGE and QUEEN-REARING outfit in northern California's Sacramento Valley. Around 3,000 colonies and nuclei. Everything necessary for package and queen production. Good home with plenty of warehouse space. Also warehouse and good locations for honey production in southern Oregon's clover seed districts. For further information write Box R. L., care American Bee Journal

USED EQUIPMENT standard 10-frame size, covers, bottoms, excluders 50c each; inner covers 20c each. Full depth supers, 9 drawn combs, \$2 each; shallow supers, 9 drawn combs, \$1.40; full depth supers, 10 empty frames, \$1. Chunk supers and other bargains. Harold Gilbert, Sheridan, Wyoming.

GOOD APIARY in eastern Montana. 100 miles of registered territory. Up-to-date warehouse, equipment and truck. Write M. M. Brown, 2202 Summitview, Yakima, Wash.

**FOR SALE**—200 clean shallow extracting supers \$1.10 each. Price includes 5¼" frames, also thin super foundation. Fred Peterson, Aiden, Iowa.

**FOR SALE**—Light honey, 10-lb. pail \$2.00 pail; 60-lb. can, new 17c lb. **ELECTRIC MOTORS NEW**—Heavy duty repulsion induction 110-220 peerless. ¼ H. P. \$38.50, 1 H. P. \$59.90, 1½ H. P. \$85.00. Briggs Stratton new 1½ H. P., gas, \$52.50. All merchandise F.O.B. Iowa City, Iowa. T. F. Slager, Iowa City, Iowa.

**FOR SALE**—250 colonies, five acres, 5 room modern home, honey house, other buildings, complete extracting equipment ten-fr. dovetailed, seven registered locations irrigated, no failures 22 years. Furnished inspection certificate. Health forces sale Dale Felix, Box 236, Corvallis, Montana.

250 Modified Dadant hives with bees and 3 supers. Paul Baldwin, Warsaw, Illinois.

**FOR SALE**—100 colonies bees in 10-frame double hives, wired combs. Inspection at time of sale. P. Goettsch, Goose Lake, Iowa.

150 new K. D. 10-frame hive bodies made of best grade pine, bored for nailing, 1¼ inch hole in one end for ventilation, \$1.10 each. J. W. Garhart, Spearfish, S. Dak.

PACKAGE BEES. Honey. Used 60's. Lewis-Dadant beeware. Harris Bee Supply, Jackson, Tennessee.

**FOR SALE**—Comb foundation machinery. One new and one used mill with trimming knives. One sheeting machine. Hawley Honey Co., Iola, Kansas.

17 Hives of bees for sale—3-story, 10-frame, mostly wired foundation. Certificate of inspection furnished with sale. Also 50-gallon extractor, drain tank and boiler with stands, electric capping knife. Earl Thomas, Box 71, Moro, Illinois.

**FOR SALE**—500 or more colonies of bees, full depth 10-frame hive bodies, 4 bodies high, wired foundation, metal covers. Can be left on locations. Have extra locations for increase. Located in Michigan choice clover and basswood territory. Sell in lots of 100 or more. Inspection at time of sale. Roland Harnick, Shepherd, Michigan.

**FOR SALE**—700 three-story hives of bees ready for delivery the last of April or in May 1948. These are standard equipment mostly dovetailed, 9 combs to each 10-frame super, two pound package and queen installed, \$15.50 each. Equipment in excellent condition; certificate of inspection furnished. Will deliver loads of 70 three-story colonies within 600 miles of Roseau, Minnesota, for a reasonable delivery fee. This is part of the Wenner Brothers Apiaries, Roseau, Minnesota. If interested write to C. G. Wenner, Glenn, California.

**FOR SALE**—Complete equipment to run 700 hives, all ten-frame. Will consider best offer on 100 hives or more. Located at Roseau, Minnesota. Package bees available. Other interests. Write to C. D. Hollister, Waseca, Minnesota.

8 2-story colonies, extracting and comb honey supers, at cost. August Gorenz, Route 2, Hampshire, Illinois.

**FOR SALE**—Used Modified Dadant equipment. Good condition, all factory made, crimp-wired foundation in combs, no AFB. 100% clean last inspection; combs in excellent condition. Hive bodies with 11 combs \$3.30; hive bodies with 11 frames \$1.10; hive bodies empty 65c. Super with

10 combs \$2.00; super with 10 frames 75c, super empty 45c. Metal telescope cover 75c; inner cover 20c. Discounts 5% over \$100.00—10% over \$200.00. Melford Olson, Red Lake Falls, Minnesota.

**SELLING** balance of outfit. Not inspected. Buyer must see before buying. Believed in good condition. 25 stands 10 and 12-frame. Some miscellaneous equipment. \$300 will handle. Roy Berry, Fowler, Indiana.

700 colony outfit, plenty supers, 10-frame, wired combs. Inspected. 11 yards in good producing area. Brick and tile extracting and packing plant. Automatic steam heat, processing, labeling and filling machinery. 1947 truck. An ideal outfit. Sell complete or colonies with or without supers. Also new deep and shallow supers with frames and foundation, at discount. Robinson Apiaries, Oelwein, Iowa.

232 colonies bees in Grant County with five good locations. Lots equipment and supplies. No disease. Clyde Cobb, Belleville, Arkansas.

**FOR SALE**—Two hundred three-story eight-frame colonies bees at \$15.00. Delivery May 1st. Dane Goedde, Worland, Wyoming.

**FOR SALE**—1,000 colonies of bees on good location. Extracting equipment and everything needed to produce a honey crop. No disease. Write Box 27, care A. B. J.

600 colonies bees, requeened 1947, in lots of 100 or more. 10-frame honey supers with bees if desired. Inspection certificate furnished. Complete list of equipment on request. NORTHERN MICHIGAN APIARIES, Petoskey, Michigan.

**FOR SALE**—New assembled 10-frame Dadant shallow supers with 9 frames each with wired foundation and wired frame. Write for prices, stating quantity desired. Massena Apiaries, Massena, N. Y.

**FOR SALE**—450 colonies bees equipped for extracted honey production. On locations. Modern home, town lots and acreage. Ernest W. Fox, Fruitdale, South Dakota.

10 FRAME cypress bottom boards, underside creosoted, \$1.00 each. Not creosoted, 90c each. All nailed up. C. O. Lundin, Rt. 2, Box 275, Pine Bluff, Arkansas.

### WANTED

WANTED—100 or 200 swarms, southern bees considered. F. McClintock, Clear Lake, Wisconsin.

WANTED—A good hand or motor driven reversible extractor. State price and condition. F. M. Dick, Brookneal, Va.

WANTED—Power extractor, 8-frame preferred. State size, type and price in first letter. Elmer Sandahl, Vining, Minn.

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400 to 500 colonies bees in California or Oregon. Troy H. Nance, 3337 21st Ave., Sacramento, California.

### POSITIONS AND HELP WANTED

WANTED—Two single men as helpers. Send references. Good wages. Dr. Clark, Newell, South Dakota.

(Please turn to page 157)

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Carloads and less than carloads. Mail sample and best prices in all grades.

C. W. AEPPLER COMPANY  
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Improved designs, embodying color, balance, simplicity, and distinction. Please send for free samples & prices.

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Line bred since 1927. Queens raised from stock of 200 to 300 lbs. after pulling bees all spring up into July. Queens mated to drones from similar selection.

9,000 Queens—Hundreds of Four Frame Nucs  
Four Frame Nucs—\$7.00 each

	Queens	2-lb.	3-lb.	
1-24	\$1.40	\$4.50	\$5.65	LARGER LOTS, WRITE
25-50	1.30	4.25	5.45	FOR PRICES

Homer W. Richard, Rt. 3, Box 252-A, El Dorado, Ark.

## BOOKED TO CAPACITY

Sorry, we cannot accept any more orders for package bees this coming season. Can still take orders for queens, delivery after May 10th, price \$1.25 each.

*Thank you one and all.*

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Fits in any standard hive like a frame. Holds 12 lbs. of syrup and fills from side of hive by sliding lid over without uncovering colony. Feed always available; bees can't drown in it. Feeds in brood nest and holds colony heat. Ideal for sulfa feeding. Builds packages rapidly.

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A trial will convince you

**W. O. GOEBEL : Knoxville, Iowa**

## 3-Banded Italian Queens and Package Bees

Full weight, highest quality, prompt delivery

2-lb. with queen	\$4.50	Each additional
3-lb. with queen	5.50	pound \$1.00

### UNTESTED QUEENS

1 to 25	\$1.25 each
25 to 50	1.20 each
50 up	1.15 each

Bessemer Apiaries : Rt. 6, Box 518, Greensboro, N. C.  
J. L. O'FERRELL, Manager

## BRIGHT ITALIAN QUEENS

Queens from our apiaries will give you beautiful gentle bees and service unexcelled. Many class them as Goldens. Many years experience has taught us the how in rearing the best. Untested queens: 1 to 24, \$1.25 each; 25 to 99, \$1.15 each; 100 up, \$1.10 each; Queens clipped and air mailed upon request.

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## QUEENS

**3-BAND ITALIANS**

**\$1.20**

**LARGE**

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**Miss Lenora Anderson**

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2-lb. with queen	\$4.50
3-lb. with queen	5.70
Queen	1.50

25% deposit to book order.  
Add 50c per package for less than 20 packages.

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We are distributors of Staley's Low Fat High Protein Expeller Processed Soy Flour for beekeepers. Write for prices.

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**PARIS, ILL.**

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To my many friends and customers:

I appreciate your past patronage, friendship and association through the many years I have been shipping bees and queens. I assure you my successor will endeavor to give you the same service and stock as has been my policy the past thirty-two years.  
R. E. LA BARRE, Box 172, Cottonwood, Shasta Co., California

**A-B-J Ads Get Results**

AMERICAN BEE JOURNAL

## Italian Package Bees and Queens

	1-24	25-49	50 up
2-lb. bees with queen	\$4.50	\$4.25	\$3.95
3-lb. bees with queen	5.50	5.25	4.95
4-lb. bees with queen	6.50	6.25	6.00
Queens	1.25	1.15	1.10

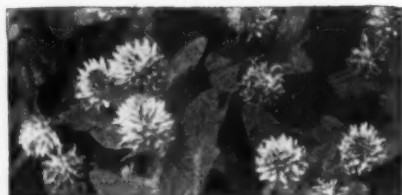
We guarantee you live delivery, satisfaction, and a health certificate with each order. A 10% deposit books your order, balance 10 days before shipping date.

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## Pellett Clover

START WITH LIVE PLANTS



Spreads rapidly from deep roots and increases from year to year. Blooms in June and July. Very attractive to bees. Root divisions may be planted in spring. Orders for delivery now. Root divisions—25, \$2.00; 100, \$5.00; 250, \$10.00; 500, \$18.00 postpaid.

**MELVIN PELLETT**

ATLANTIC, IOWA

NORTHERN CALIFORNIA  
TOP QUALITY

## ITALIAN PACKAGE BEES AND QUEENS

Booked solid for April packages.  
Have open May dates for  
Packages.

QUEENS AT \$1.35 IN LARGE  
LOTS. AFTER MAY 10TH \$1.25.

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2436 North St. Redding, California



**SCIENTIFIC BEEKEEPING**  
*New* **REVOLUTIONARY  
METHOD**  
Send for Valuable Free Bulletin  
**THE BEE MASTER**  
EARTHMASTER PUBLICATIONS  
DEPT. 3, BOX 547, ROSCOE, CALIFORNIA

## CAUCASIANS

2-lb. pkg. \$5.00. 3-lb. pkg. \$6.00  
No extra queens until May.

**D. T. WINSLETT**

1015 Sonoma Ave.  
NO. SACRAMENTO 15, CALIFORNIA

## Italian Package Bees and Queens FOR 1948

HEALTH CERTIFICATE—PROMPT SHIPMENT  
LIVE DELIVERY GUARANTEED.

PRICES AS  
FOLLOWS

	1-25	26 up
2-lb. package with queen	\$4.50	\$4.25
3-lb. package with queen	5.50	5.25
4-lb. package with queen	6.50	6.25
5-lb. package with queen	7.50	7.25
Queens	1.35	1.25

**B. J. Bordelon Apiaries**

**Moreauville, La.**

## HONEY EXTRACTORS

WE MANUFACTURE

**Extractors,  
Continuous Clarifiers,  
Filters, Etc.**

Let us help you equip your honey  
house for efficient operation.



Write us for information  
today.

**THE NEISES CO.**

P. O. Box 249

**MARSHFIELD, WIS.**

## Italian Package Bees and Queens For 1948

Quantity	1-29	30-98	99 & over
2-lbs. with queen	\$4.30	\$4.15	\$4.00
3-lbs with queen	5.30	5.15	5.00
Extra queens	1.35	1.30	1.25

For queenless packages deduct the price of the queen

Package prices are F. O. B. Tifton, Georgia. Queens only are postpaid

Terms: \$1.00 deposit per package when the order is booked and the remainder is due 10 days prior to shipping. Cancellations are in order at any time prior to shipping and deposits will be promptly returned.

**GIRARDEAU APIARIES**

**TIFTON, GEORGIA**



# HONEY GIRL APIARIES

## Package BEES and QUEENS When You Want Them

### ITALIAN BEES AND QUEENS

	1 to 9	10 to 49	50 to 99	100 and above
2-lb. package with queen—(each)	\$4.50	\$4.25	\$4.15	\$4.00
3-lb. package with queen—(each)	5.65	5.40	5.30	5.15
4-lb. package with queen—(each)	6.80	6.55	6.45	6.30

Extra queen, untested, \$1.35, any quantity—Tested, \$2.00, any quantity

**W. E. CASE, Proprietor : Moreauville, Louisiana**

# RICH'S

## Leather Italian Package Bees and Queens

We guarantee every queen that is shipped to be mated and of proven laying ability, also that there is no gentler or higher producing stock available.

PRICES: From April 1st to June 1st.

	Queens	2-lbs	3-lbs.	4-lbs.	Add 30c per queen when ordering disease resistant stock
1-24	\$1.40	\$4.50	\$5.85	\$7.20	
25-99	1.30	4.25	5.55	6.85	
100-up	1.20	4.00	5.25	6.50	

We are also happy to announce that we will have available May 15th queens of the **FINEST DISEASE RESISTANT STOCK** yet developed. They compare very favorably with the gentle temper of our proven regular stock. Their honey gathering ability is also equal to the best that we have to offer. All queens up to May 15th are sold out.

**THE RICH HONEY FARMS : Jeanerette, Louisiana**

## New Improved Master Mix Pollen For 1948

We have 240 colonies with electric heaters. Drones are hard to rear out of season, but we have done it time and again. We had an extra strong colony that we were running for fine drones, feeding it heavy on syrup and keeping the temperature up to 80 they have taken 2 pounds of Master Mix in November 1947. Heat does no good for brood rearing unless you have pollen and feed.

Customers write like this: The Master Mix I bought did very well at my apiaries, 35 miles South of New York. From Michigan, I used it last year and had good results. From Kansas, February 1947, wrote, I used it last year and had splendid results, ship 6 more pails at once. From Illinois, I started feeding Master Mix in 1946 and it is marvelous how they respond, especially the weaker colonies, 1946 was a poor year and I was the only person among several who received a good surplus, I credit that fact to Master Mix Pollen. The bees received from you did well.

1 No. 10 lb. pail, Net weight 8 1/2 lbs. Price **\$2.50—6 for \$13.50**

1 No 60 Can, Net weight 53 lbs. Price **\$12.00. FREE CIRCULARS.**

We breed three kinds of queens. **ITALIANS, CAUCASIANS** mated to Italian drones and daughters of queens bred for resistance. Over 30 years a shipper all over U. S. A. and Canada.

2-lb. package bees with queen-----**\$5.00**

3-lb. package bees with queen-----**6.25**

4-lb. package bees with queen-----**7.50**

Extra queens, **\$1.50** each.

Discount on large lots.

10% down books your order.

**Blue Bonnet Apiaries : Rt. 2, Box 23, Weslaco, Texas**

**An Ad in the A-B-J Brings Satisfactory Results. Try it**

## POSITIONS AND HELP WANTED

(Continued from page 153)

**WANTED**—Reliable, experienced man to help operate 600 colonies of bees on shares coming season. Desire person capable of assuming entire management of business in following years. Box 24, care American Bee Journal.

**WANTED**—Reliable young man, single or married, experienced in producing honey. State wages. Rex Schlemmer, Edgar, Mont.

**APIARY INSPECTORS.** Seasonal work from April to October—\$7.92 a day plus expenses. Automobile required. Inquire Michigan Civil Service Commission, 310 North Grand Avenue, Lansing, Michigan.

**EXPERIENCED AND INEXPERIENCED** help in honey production. Seasonal or year around. State age, bee and truck experience. Stewart Apiaries, Fairfax, Missouri.

**AGRICULTURE STUDENT.** Apiary helper. May to September 15. 6 ft., 160 lbs. Good health and references. Sidney Nyholm, 69 South Fifth Avenue, Clarion, Pa.

**OPPORTUNITY** to get into bee business for self—men wanted to help in honey production, learn our methods, then lease bees from us. Give full particulars in reply. No boozers. Located Midwest and far north. Box MO, care American Bee Journal.

**DEPENDABLE** queen breeder wanted. State wages expected and references in first letter. Ephardt Honey Farms, Plaquemine, Louisiana.

**EXPERIENCED,** competent, reliable man wants 200 to 300 stands bees with locations to work on share basis. North or West preferred. Box 111, Care American Bee Journal.

**WANTED**—Experienced queen breeder and package beemen for our apiaries. Only honest, reliable men considered, no boozers. Give full information, age, experience, and salary expected in first letter. Good opportunity for right parties. York Bee Company, Jesup, Georgia.

**WANTED**—Two men to work in our apiaries. Opportunity for advancement. Salary plus bonus. Schultz Honey Farms, Ripon, Wis.

**WANTED**—Reliable, experienced man. Give full information, age, experience and salary expected. Beeline Honey Farm, Menomonie, Wisconsin.

**EXPERIENCED AND INEXPERIENCED** help needed in package bee production for 1948 season. Also queen breeder. Year around job right parties. F. E. Morrison, Rt. 2, Box 103, Auburn, California.

### SUPPLIES

**LEWIS BEEWARE, DADANT'S FOUNDATION** at catalog prices for S. E. Minnesota and Wisconsin beekeepers. Clover honey packed ready for your label or labeled: case 24, 1-lb. \$6.72; 12 2-lb. \$6.48; 6 5-lb. \$6.90. Amber honey in 60's, 17c. Red Wing Apiaries, C. G. Langley, Owner, Box 176, Red Wing, Minnesota.

**YOUR WAX WORKED** into high quality medium brood foundation, 22c pound; 100

pounds, \$18.00. Also medium brood foundation for sale at 75c pound. Fred Peterson, Alden, Iowa.

**CLEAN UP AFB** with sulfa. 25 tablets 50c; 50, \$1.00; 100, \$1.50; 1,000, \$6.00. Free Circular, quick shipment. WALTER T. KELLEY CO., PADUCAH, KENTUCKY.

**FOR SALE**—25,000 mill run Lewis sections 3"x5x1 1/2" scalloped 4 sides 1/2 inch at \$14.00 per thousand, f.o.b. Hamilton, Illinois. Dadant & Sons, Hamilton, Illinois.

**HIVE BODIES,** covers and bottom boards, bee shipping cages and nuclei hives. All supplies new and knocked down. Price list furnished on request. A & B Supply Company, Coffee Springs, Alabama.

**ELECTRIC** uncapping knives in stock, \$12.18 postpaid. Quick shipment. Walter Kelley Co., Paducah, Kentucky.

**FRAMES AND SUPERS** from select materials. Supers 9%, \$1.05, frames 7 1/2c. Supers 6%, 75c; 5%, 60c; frames 7c. Discount 10 per cent on orders of \$100.00 or more. Prices on other sizes and designs on request. Montana Bee Supply, Ronan, Montana.

**POLLEN SUBSTITUTES**—Soybean Flour (expeller processed), 12-lb. bag, \$1.80; 24-lb. bag, \$2.90; 100-lb. bag, \$9.50. Dried Brewer's Yeast (animal), 1 to 25 lbs., 35c per lb.; 25-lb. bag, \$6.25; 100-lb. bag \$19.50. Please allow for postage if by parcel post. Free instructions for using with your order. HONEY SALES COMPANY, 1806-08 NO. WASHINGTON AVE., MINNEAPOLIS 11, MINNESOTA.

**FICKUP BEEKEEPER'S WHEELBARROW** picks 'em up and sets 'em down. Wheel them up a plank on to truck. Has large rubber tire. Send for circular. Paul W. Johnson, Rt. 2, Peru, Indiana.

**BEEKEEPER'S SUPPLIES.** May we quote you. Simeon B. Beiler, Intercourse, Penn.

**SMOKER CANE** made of steel. Stick cane in ground, slip smoker off as needed. Fits all standard size smokers. \$1.00 each postpaid. Paul W. Johnson, Rt. 2, Peru, Indiana.

**SIMPLEX TRAP** clips queens without handling. \$1.75 postpaid. **INSTANT FRAME SPACERS**—seven-eight-nine, specify size. \$1.50 postpaid. Free circulars. George Leys, 36 Jackson Street, New Rochelle, N. Y.

**FRAMES,** Western Pine, standard brood and extracting, Hoffman style. \$8.00 per hundred. Quantity prices on request. Prompt shipment. Arizona Hive Parts Co., Florence, Arizona.

**MECHANICAL DEVICE** for applying paste to labels. Fast and efficient. 50c each postpaid. Dealers write for prices. Paul W. Johnson, Rt. 2, Peru, Indiana.

**PORTER BEE ESCAPES** are fast, reliable, labor savers. R. & E. C. Porter, Lewis-town, Illinois.

**WRITE FOR CATALOGUE.** Quality bee supplies at factory prices. Prompt shipment. Satisfaction guaranteed. The Hubbard Apiaries. Manufacturers of Beekeepers' Supplies, Onsted, Michigan.

### SEEDS AND TREES

**PERMANENT DEEP-ROOTED** trees, shrubs,

and perennials of 60 nectar and pollen varieties. Write for new list of 8 additional and a newly found cash nectar crop of proven build-up value. NICOLLET COUNTY NURSERY, St. Peter, Minnesota.

**SEEDS OF HONEY PLANTS. PURPLE LOOSESTRIPE,** good honey plant for wet land. Seed, per ounce (40,000 seeds) \$1.00; 1/4 pound \$3.00; pound \$8.00. **GOLDEN HONEY PLANT,** 2 ounces \$1.00; 1/2 pound \$3.00. **CHAPMAN HONEY PLANT,** easy to grow, 1/2 pound \$1.00; 3 pounds \$5.00. **ANISE HYSSOP,** blooms from June until frost, ounce \$2.00; 1/4 pound \$5.00. **SAINFOIN,** per pound \$1.00. All postpaid. Circular on request. Melvin Pellett, Atlantic, Iowa.

**TRY** the new Pellett Clover. Place your order for root divisions for shipment. See ad on page 155. Melvin Pellett, Atlantic Iowa.

**NEED A HOBBY? Raise a BEE GARDEN.** One packet each of twelve good honey plants for \$2.00 postpaid. Free honey plant circular. Melvin Pellett, Atlantic, Iowa.

**RAISE YOUR OWN** trees and shrubs from seed for shade, windbreak, prevention of soil erosion, etc. Write for prices and information. Woodlot Seed Co., Norway, Mich.

### MISCELLANEOUS

**INTERESTING, NEW, DIFFERENT. PROFITABLE** magazine for backlotter, suburbanites, part-time farmers. \$2.00 yearly, or sample copy 20c coin. **BACKYARD FARMER,** 223 Bellis Street, Duluth 3, Minn.

**BEEKEEPERS! Why** be bothered with robber bees? Write for free literature. R. W. McWethy, Dixon, Illinois.

**AT LONG LAST!** May 10, through 15, 1948, six full-day course in beekeeping in the apiary by the South's leading authorities on Swarm Control; Queen Rearing; Queen Introduction; Package Bee Installation; Hive Manipulation; Honey Grading and Packing; Making Increase; Disease Diagnosis and Control; Moving Pictures each night on Practical Beekeeping in the South. For full information address L. C. Dotson, 207 Haas-Howell Bldg., Atlanta, Georgia.

**POEMS WANTED** for musical setting. Send poems for immediate consideration. Hamann Service, 660 Manhattan Building, Milwaukee, Wisconsin.

**RANCH MAGAZINE**—Do you find it difficult to secure information about sheep and sheep ranching methods? The **SHEEP AND GOAT RAISER** reaches more sheepmen with more information on range sheep than any magazine published. Subscription \$1.50. Hotel Cactus, San Angelo, Texas.

**THE BEE WORLD**—The leading bee journal in Great Britain and the only international bee review in existence. Specialize in the world's news in both science and practice of apiculture. Specimen copy, post free, 12 cents, stamps. Membership of the Club, including subscription to the paper 10/6. The Apis Club, The Way's End, Foxton, England.

**INDIAN BEE JOURNAL**—The only Bee Journal of India. Sample copy against 25 cents (or 1s 6d.) postage stamps. Yearly 7s. 6d. (\$1.50) international M. O. Apply—Bhupen Apiaries (Himalayas, Ramparh, Dist. Nainital, U. P., India.

## GARON'S QUEENS • FROM NORTHERN BRED A. F. B. DISEASE RESISTANT STOCK

These queens are bred from the finest available Disease Resistant Stock and are bred for Heavy Honey Production, Moderate Temper and other desirable characteristics.

**PRICES**—1-9 at \$1.65; 10-49 at \$1.55; 50-99 at \$1.45; 100-up at \$1.40

Our D. R. Queens may be had with packages by including these prices to queenless packages shown in our ad on page 113 of this magazine.

## GARON BEE COMPANY : Donaldsonville, La.

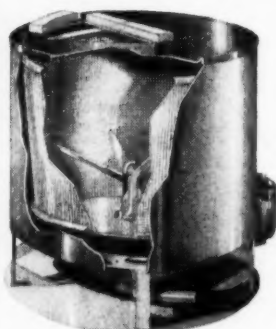
## GASPARD'S Quality Italian Queens and Package Bees

We are now booking orders for spring 1948 delivery. Only 20% with order, balance 10 days before shipping time. We guarantee live arrival and health certificate accompanies each shipment. Our shipping date starts April 1st. Prices as follows:

2-lb. package with queen	1.49	50 Up
3-lb. package with queen	\$4.25	\$4.00
4-lb. package with queen	5.25	5.00
5-lb. package with queen	6.25	6.00
	7.25	7.00
Queens \$1.35		

**GASPARD BEE CO. : HESSMER, LA.**

## The Diamond Line Spinner



Pat. Applied For.

A Honey of a moneymaker

The extracting season is just around the corner! By placing your order NOW for one of the sensational, stainless steel capings driers, you will be sure of receiving your SPINNER before the start of the rush season. Fully guaranteed for 1 year against mechanical failure. Shipping wt. 230 lbs. Priced complete with motor, ready for instant operation at

**\$225.00 F. O. B.**

### THE DIAMOND MATCH COMPANY

APIARY DEPARTMENT

1300 PRODUCE STREET  
LOS ANGELES 21, CALIFORNIA

Or

CHICO,  
CALIFORNIA

Write for complete catalogue.

## The Old Reliable 3-Banded Italian Queens That Get the Job Done

Also pure Caucasian Queens and Caucasian Queens mated to Italian drones. All daughters of carefully selected heavy producing queens mated to drones of equal quality. PRICES:

QUEENS, each	1-24	25-49	50-100
	\$1.40	\$1.30	\$1.20

Ready for shipment April 1st, in large or small quantities. All queens mated and laying. Health Certificate furnished and LIVE DELIVERY GUARANTEED.

**PINE BLUFF BEE FARMS : Rt. 3 : Pine Bluff, Ark.**

## ROOT SERVICE from Chicago in Nineteen Forty-eight

Plan ahead. Order early the supplies you will need. We will try to have them for you.

### BEEKEEPERS' SUPPLIES

Root Quality—the best hives, supers, frames, sections, foundation, all equipment, bees and literature.

### HONEY CONTAINERS

Glass and Tin—best makes, jars, cans, pails, all standard sizes.

### BEE SWAX

Good average and light yellow. We want it—highest market prices—Cash or trade.

ASK FOR OUR BEE-SUPPLY PRICE LIST.

ASK FOR OUR CONTAINER PRICE LIST.

**A. I. ROOT CO. of Chicago** 224 W. Huron St., CHICAGO, ILL

## California Package Bees

FROM APIARIES FREE OF  
A. F. B. OR NOSEMA.

2-lbs., \$4.50 — 3-lbs., \$5.50

Italian or Caucasian Queens.

20% deposit books order.

**L. E. HALSTEAD APIARIES**

Rt. 11, Box 890, Fresno, Calif.

## G. B. Lewis Wooden Goods!

Dadant's famous crimp wired foundation. Catalogue on request. Productive Italian package bees and queens, April and May. No deposit required.

## Dotson's Apiaries

3059 W. Roxboro Rd., N. E., Atlanta Ga.

### LEATHER COLORED

## Italian Queens—Package Bees

We are booked up for Queen orders for April and May, but have some open dates for 3-lb. packages for April or May delivery at \$5.60.

**HUMPHREY BEE FARM**  
MOUNT VERNON, GEORGIA

## Why not try HIVE WARMING?

It is making money for good managers. How? By early Spring Build-up and Prevention of Chilled Brood.

Users of the Bee-Lyon Warmers are enthusiastic. The Bee-Lyon follows the proven Starnes System. Installation without unsealing hive. Low price per hive. Automatic temperature control.

Send today for

**FREE LITERATURE**

**LYON RURAL ELECTRIC CO.**

Dept. BJ,  
SAN DIEGO, (12) CALIF.

## Three-Banded Italian Bees

Packages with Queens

	1-9	10-49	50-99	100-over
2-lb pkg.	\$4.40	\$4.20	\$4.10	\$4.00
3-lb. pkg.	5.40	5.20	5.10	5.00

Extra Queens \$1.25 each

**J. P. CORONA**

BOX 124

KENNER, LOUISIANA

## Quality Package Bees & Queens

ITALIAN STOCK of proven strain. Write us for late prices and shipping dates.

**BENNETT BEE FARMS**

1504 N. Main St. Hattiesburg, Miss.



**Our shipping season usually starts the last days of March. Prior to that time we book only 50% of average capacity. As we start shipping, we will be accepting more orders all during the shipping season.**

The war's end released men who are now going on their third year of employment with us. Yes, we have a full complement of trained employees. For the past two years we have been devoting considerable time and material to experimental projects with a view to making The Daniels Apiaries as modern in every detail as is possible. The results of these experimental projects have brought about a great host of improvements and they will reflect to our patrons' advantage to give you greater value per dollar invested and greater pleasure.

1948-1947 PRICES					
Lot	Queens	2-lb.	3-lb.	4-lb.	5-lb.
1-5	\$1.55	\$4.75	\$6.00	\$7.25	\$8.50
5-15	1.50	4.65	5.90	7.15	8.40
15-25	1.40	4.50	5.75	7.00	8.25
25-up	1.35	4.40	5.65	6.90	8.15

Above package prices include queen. Queenless packages, subtract \$1.35 from price of package with queen. All queens are airmail, postpaid, but package bees are F. O. B. shipping point and are shipped Express collect. It is preferable to ship package bees by railway Express, however, they can be mailed and in that event, customer should include postage.

**TERMS:** Small orders, cash in full. Large orders, 20 per cent deposit, balance to be received two weeks before shipping date. U. S. funds. A 10 per cent discount is allowed on package bees if shipment is to be made after May 20th. A 20 per cent discount is allowed on queens if shipment is to be made after May 20th. and a 30 per cent discount is allowed on queens to be shipped after June 1st.

**ONE OF THE WORLD'S LEADING STRAINS OF LIGHT COLORED ITALIANS**

## **THE DANIELS APIARIES**

### **PICAYUNE, MISSISSIPPI**

# **TANQUARY'S**

## **ITALIAN BEES AND QUEENS**

Our 6,000 colonies and 14,000 nuclei were never in better shape. This means we can ship you good package bees and queens. TANQUARY bees and queens for good crops—they do the job for you.

Quantity	1-5	6-49	50-99	100-up
2-lb. packages bees with queens	\$4.50	\$4.35	\$4.20	\$4.00
3-lb. packages bees with queens	5.65	5.50	5.25	5.00
4-lb. packages bees with queens	6.75	6.50	6.25	6.00
5-lb. packages bees with queens	7.75	7.50	7.25	7.00
Queens (Postpaid)	1.35	1.30	1.25	1.20

Tested queens (Postpaid) any number \$2.00

Queenless packages, deduct price of queen.

Queens clipped at no extra cost.

\$1.00 per package books your order, balance ten days before shipment is made. We are booking orders fast. All bees shipped in new cages. Health certificate with each shipment. Safe arrival guaranteed.

**BEE WISE—ORDER EARLY**

## **TANQUARY HONEY FARMS, Inc.**

### **LENA, SOUTH CAROLINA**



Above photo shows a portion of one of our queen yards containing over 10,000 nuclei.

## ITALIAN BEES <sup>A N D</sup> YOUNG QUEENS

Place your order early for shipment on date desired

### PRICES—WITH QUANTITY DISCOUNTS

	1 to 9	10 to 49	50 to 99	100 & above
2-lb. pkg. with queen (each)---	\$4.50	\$4.25	\$4.15	\$4.00
3-lb. pkg. with queen (each)---	5.65	5.40	5.30	5.15
4-lb. pkg. with queen (each)---	6.80	6.55	6.45	6.30
Queens (each)	\$1.35.	Tested \$2.00		

NO ORDER TOO LARGE NONE TOO SMALL TO BE APPRECIATED

**OVERBEY APIARIES : Bunkie, La.**

## YORK'S PACKAGE BEES & QUEENS *for* 1948 QUALITY BRED ITALIANS

THE STRAIN PREFERRED BY LEADING HONEY PRODUCERS

BOOKING ORDERS FOR MAY AND LATER SHIPPING, BOOKED FULL FOR APRIL.

### PACKAGE BEES WITH QUEENS

Quantity	1 to 2	3 to 27	30 to 99	102 up
2-lb. packages -----	\$4.65 each	\$4.50 each	\$4.25 each	\$4.00 each
3-lb. packages -----	5.85 each	5.65 each	5.40 each	5.15 each
Extra queens -----	1.50 each	1.45 each	1.40 each	1.35 each

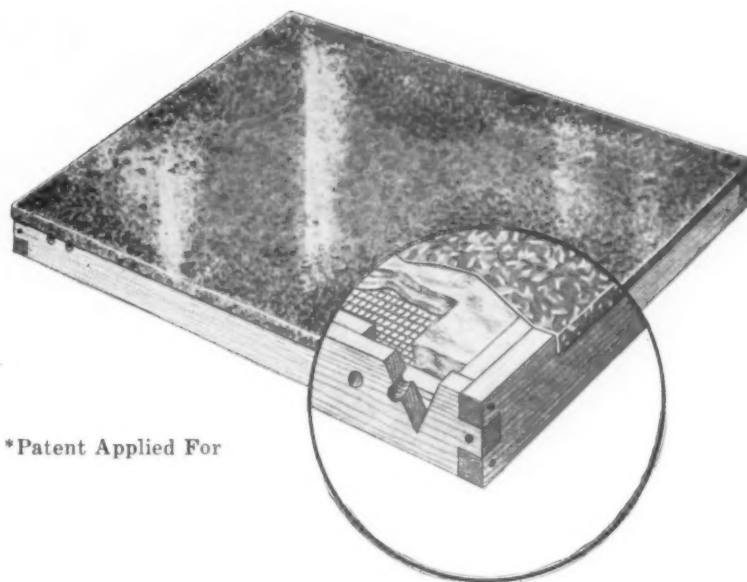
Queenless packages, deduct \$1.15 per package.

If convenient, small orders cash, large orders \$1.00 deposit per package, balance not less than two weeks prior to shipping date. We recommend 3-lb. packages. Shipping will begin as early in spring as weather conditions will permit usually about first week of April. Help us to help you by booking your May dates as early as possible.

**YORK BEE COMPANY : Jesup, Georgia, U. S. A**  
(THE UNIVERSAL APIARIES)

# All the Time is "I-V" \* Time!

**"I"**  
is for  
**Insulation**



**"V"**  
is for  
**Ventilation**

\*Patent Applied For

The "I-V" is a year around cover—without adjustment it is used spring, summer, fall and winter

- ★ It COOLS the hive in summer.
- ★ It PRESERVES THE HIVE HEAT in winter.
- ★ It ALLOWS THE MOISTURE TO ESCAPE, thus practically eliminating frost and needless killing of bees.
- ★ It has DONE AWAY WITH WINTER PACKING of the hive in certain areas.
- ★ IT INSULATES! . . . IT VENTILATES!

For the health and comfort of YOUR bees, use the new "I-V" Cover

Contact your nearest Lewis-Dadant dealer.  
He will be glad to serve your every need.  
Or write us for further information.

**G. B. LEWIS COMPANY : Watertown, Wisconsin**

BRANCHES: COLONIE & MONTGOMERY STS., ALBANY 1, NEW YORK

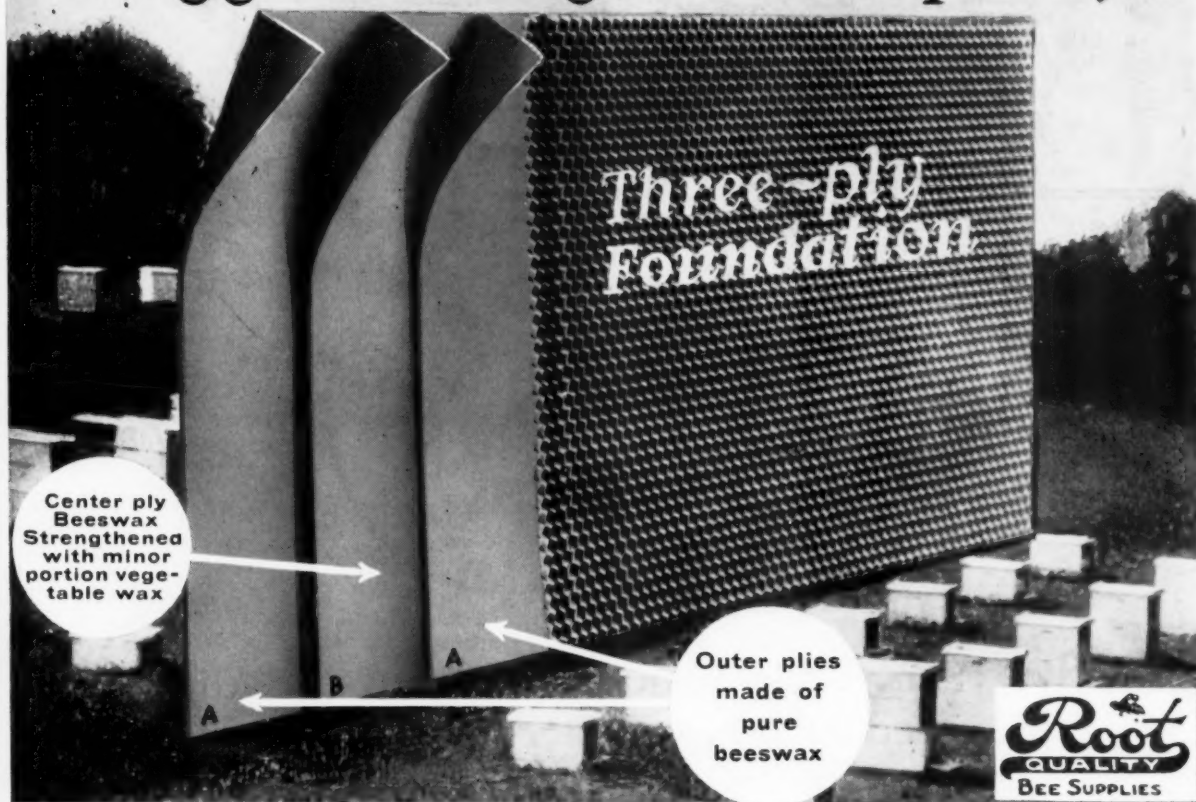
1117 JEFFERSON ST., LYNCHBURG, VIRGINIA

214 PEARL ST., SIOUX CITY 14, IOWA



5201 WOODWARD AVE  
DETROIT 2 MICHIGAN  
DEC 41-42-43-44-45-46-47-48

## Biggest Thing in The Apiary



## Good Combs Mean Low Cost Production and More Honey

Root's 3-Ply Foundation produces the best combs because it will stand hot weather without sagging, stretching or warping.

It will contain the maximum of worker cells in the brood nest because it holds its shape and does not encourage drone cell construction.

Three-Ply will stand up in the extractor year after year.

**TRY IT AND COMPARE**

**THE A. I. ROOT CO.**

MEDINA, OHIO

ESTABLISHED 1869

Root  
QUALITY  
BEE SUPPLIES

Root  
QUALITY  
BEE SUPPLIES